# Guaranty Trust Bank Past Questions and Answers 

## MATHEMATICS

## BASIC ALGEBRA

1. If Lynn can type a page in p minutes, what piece of the page can she do in 5 minutes?
A. $5 / \mathrm{p}$
B. $\mathrm{p}-5$
C. $p+5$
D. $\mathrm{p} / 5$
E. $1-\mathrm{p}+5$

ANS A
2. If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for both of them to paint the house together?
A. 2 hours and 24 minutes
B. 3 hours and 12 minutes
C. 3 hours and 44 minutes
D. 4 hours and 10 minutes
E. 4 hours and 33 minutes ANS A
3. Employees of a discount appliance store receive an additional $20 \%$ off of the lowest price on an item. If an employee purchases a dishwasher during a $15 \%$ off sale, how much will he pay if the dishwasher originally cost $\$ 450$ ?
A. $\$ 280.90$
B. $\$ 287$
C. $\$ 292.50$
D. $\$ 306$
F. $\$ 333.89$

ANS D
4. The sales price of a car is $\$ 12,590$, which is $20 \%$ off the original price. What is the original price?
A. $\$ 14,310.40$
B. $\$ 14,990.90$
C. $\$ 15,290.70$
D. $\$ 15,737.50$
E. $\$ 16,935.80$

ANS D
5. Solve the following equation for $\mathrm{A}: 2 \mathrm{~A} / 3=8+4 \mathrm{~A}$
A. -2.4
B. 2.4
C. 1.3
D. -1.3
E. 0

ANS A
6. If Leah is 6 years older than Sue, and John is 5 years older than Leah, and the total of their ages is 41 . Then how old is Sue?
A. 8
B. 10
C. 14

## ANS A

7. Alfred wants to invest $\$ 4,000$ at $6 \%$ simple interest rate for 5 years. How much interest will he receive?
A. $\$ 240$
B. $\$ 480$
C. $\$ 720$
D. $\$ 960$
E. $\$ 1,200$

## ANS E

8. Jim is able to sell a hand-carved statue for $\$ 670$ which was a $35 \%$ profit over his cost. How much did the statue originally cost him?
A. $\$ 496.30$
B. $\$ 512.40$
C. $\$ 555.40$
D. $\$ 574.90$
E. $\$ 588.20$

ANS A
9. The city council has decided to add a $0.3 \%$ tax on motel and hotel rooms. If a traveler spends the night in a motel room that costs $\$ 55$ before taxes, how much will the city receive in taxes from him?
A. 10 cents
B. 11 cents
C. 15 cents
D. 17 cents
E. 21 cents

ANS D
10. A student receives his grade report from a local community college, but the GPA is smudged. He took the following classes: a 2 hour credit art, a 3 hour credit history, a 4
hour credit science course, a 3 hour credit mathematics course, and a 1 hour science lab. He received a "B" in the art class, an "A" in the history class, a "C" in the science class, a " $B$ " in the mathematics class, and an "A" in the science lab. What was his GPA if the letter grades are based on a 4 point scale? $(A=4, B=3, C=2, D=1, F=0)$
A. 2.7
B. 2.8
C. 3.0
D. 3.1
E. 3.2

## ANS C

11. Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of $\$ 10$ and time and $1 / 2$ for any hours worked over 8 in a day. How much did Simon get paid?
A. $\$ 120.25$
B. $\$ 160.75$
C. $\$ 173.75$
D. $\$ 180$
E. $\$ 182.50$

ANS C
12. Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?
A. 4
B. 8
C. 12
D. 13
E. 16

ANS D
13. If $r=5 z$ then $15 z=3 y$, then $r=$
A. y
B. 2 y
C. 5 y
D. 10 y
E. 15 y

ANS A
14. If 300 jellybeans cost you $x$ dollars. How many jellybeans can you purchase for 50 cents at the same rate?
A. $150 / \mathrm{x}$
B. 150 x
C. $6 x$
D. $1500 / \mathrm{x}$
E. 600x

ANS A
15. Lee worked 22 hours this week and made $\$ 132$. If she works 15 hours next week at the same pay rate, how much will she make?
A. $\$ 57$
B. $\$ 90$
C. $\$ 104$
D. $\$ 112$
E. $\$ 122$

ANS C
16. If $8 x+5 x+2 x+4 x=114$, the $5 x+3=$
A. 12
B. 25
C. 33
D. 47
E. 86

## ANS C

17. You need to purchase a textbook for nursing school. The book cost $\$ 80.00$, and the sales tax where you are purchasing the book is $8.25 \%$. You have $\$ 100$. How much change will you receive back?
A. $\$ 5.20$
B. $\$ 7.35$
C. $\$ 13.40$
D. $\$ 19.95$
E. $\$ 21.25$

## ANS C

18. You purchase a car making a down payment of $\$ 3,000$ and 6 monthly payments of $\$ 225$. How much have you paid so far for the car?
A. $\$ 3225$
B. $\$ 4350$
C. $\$ 5375$
D. $\$ 6550$
E. $\$ 6398$

## ANS B

19. Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are purchased in sets of 6 for $\$ 2.35$ per pack. Staplers are sold in sets of 2 for 12.95 . How much will purchasing these products cost?
A. $\$ 132.85$
B. $\$ 145.75$
C. $\$ 162.90$
D. $\$ 225.25$
E. $\$ 226.75$

ANS A
20. If $y=3$, then $y 3(y 3-y)=$
A. 300
B. 459
C. 648
D. 999
E. 1099

## ANS C

## ADVANCE ALGEBRA

1. If the average of three numbers is V . If one of the numbers is Z and another is Y , what is the remaining number?
A. ZY-V B.Z/V-3-Y
B. $Z / 3-V-Y$
C. $3 \mathrm{~V}-\mathrm{Z}-\mathrm{Y}$
D. $\mathrm{V}-\mathrm{Z}-\mathrm{Y}$

ANS D
2. Two cyclists start biking from a trail's start 3 hours apart. The second cyclist travels at 10 miles per hour and starts 3 hours after the first cyclist who is traveling at 6 miles per hour. How much time will pass before the second cyclist catches up with the first from the time the second cyclist started biking?
A. 2 hours
B. $41 / 2$ hours
C. $53 / 4$ hours
D. 6 hours
E. $71 / 2$ hours

ANS B
3. Jim can fill a pool carrying buckets of water in 30 minutes. Sue can do the same job in 45 minutes. Tony can do the same job in $11 / 2$ hours. How quickly can all three fill the pool together?
A. 12 minutes
B. 15 minutes
C. 21 minutes
D. 23 minutes
E. 28 minutes

## ANS B

4. Mary is reviewing her algebra quiz. She has determined that one of her solutions is incorrect. Which one is it?
A. $2 x+5(x-1)=9 x=2$
B. $p-3(p-5)=10 p=2.5$
C. $4 y+3 y=28 y=4$
D. $5 w+6 w-3 w=64 w=8$
E. $\mathrm{t}-2 \mathrm{t}-3 \mathrm{t}=32 \mathrm{t}=8$

ANS E
5. What simple interest rate will Susan need to secure to make $\$ 2,500$ in interest on a \$10,000 principal over 5 years?
A. $4 \%$
B. $5 \%$
C. $6 \%$
D. $7 \%$
E. $8 \%$

ANS B
6. Which of the following is not a rational number?
A. -4
B. $1 / 5$
C. $0.8333333 \ldots$....
D. 0.45

ANS
7. A study reported that in a random sampling of 100 women over the age of 35 showed that 8 of the women were married 2 or more times. Based on the study results, how many women in a group of 5,000 women over the age of 35 would likely be married 2 or more times?
A. 55
B. 150
C. 200
D. 400
E. 600

## ANS D

8. John is traveling to a meeting that is 28 miles away. He needs to be there in 30 minutes. How fast does he need to go to make it to the meeting on time?
A. 25 mph
B. 37 mph
C. 41 mph
D. 49 mph
E. 56 mph
9. If Steven can mix 20 drinks in 5 minutes, Sue can mix 20 drinks in 10 minutes, and Jack can mix 20 drinks in 15 minutes, how much time will it take all 3 of them working together to mix the 20 drinks?
A. 2 minutes and 44 seconds
B. 2 minutes and 58 seconds
C. 3 minutes and 10 seconds
D. 3 minutes and 26 seconds
E. 4 minutes and 15 seconds

## ANS A

10. If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?
A. 0.8 days
B. 1.09 days
C. 1.23 days
D. 1.65 days
E. 1.97 days

ANS B
11. Jim has 5 pieces of string. He needs to choose the piece that will be able to go around his $36-$ inch waist. His belt broke, and his pants are falling down. The piece needs to be at least 4 inches longer than his waist so he can tie a knot in it, but it cannot be more that 6 inches longer so that the ends will not show from under his shirt. Which of the following pieces of string will work the best?
A. 3 feet
B. $3^{3 / 4}$ feet
C. $31 / 2$ feet
D. $3^{1 / 4}$ feet
E. $2 \frac{1}{2}$ feet

## ANS C

12. The last week of a month a car dealership sold 12 cars. A new sales promotion came out the first week of the next month and the sold 19 cars that week. What was the percent increase in sales from the last week of the previous month compared to the first week of the next month?
a. $58 \%$
b. $119 \%$
c. $158 \%$
d. $175 \%$
e. $200 \%$
13. If two planes leave the same airport at 1:00 PM, how many miles apart will they be at 3:00 PM if one travels directly north at 150 mph and the other travels directly west at 200 mph ?
A. 50 miles
B. 100 miles
C. 500 miles
D. 700 miles
E. 1,000 miles ANS C
14. During a 5-day festival, the number of visitors tripled each day. If the festival opened on a Thursday with 345 visitors, what was the attendance on that Sunday?
A. 345
B. 1,035
C. 1,725
D. 3,105
E. 9,315

## ANS E

## AVERAGES AND ROUNDINGS

1. Round 907.457 to the nearest tens place.
A. 908.0
B. 910
C. 907.5
D. 900
E. 907.46

## ANS B

2. At a certain high school, the respective weights for the following subjects are:

Mathematics 3, English 3, History 2, Science 2 and Art 1. What is a student's average whose marks were the following: Geometry 89, American Literature 92, American History 94, Biology 81, and Sculpture 85 ?
A. 85.7
B. 87.8
C. 88.9
D. 89.4
E. 90.2

ANS C
3. Ginger over the course of an average work-week wanted to see how much she spent on lunch daily. On Monday and Thursday, she spent $\$ 5.43$ total. On Tuesday and Wednesday, she spent $\$ 3.54$ on each day. On Friday, she spent $\$ 7.89$ on lunch. What was her average daily cost?
A. $\$ 3.19$
B. $\$ 3.75$
C. $\$ 3.90$
D. $\$ 4.08$
E. $\$ 4.23$

## ANS D

4. What is 1230.932567 rounded to the nearest hundredths place?
A. 1200
B. 1230.9326
C. 1230.93
D. 1230
E. 1230.933

## ANS A

5. Subtract the following numbers rounded to the nearest tenths place. 134.679-45.54867.8807
A. 21.3
B. 21.25
C. -58.97
D. -59.0
E. 1

## ANS A

6. What is the absolute value of -9 ?
A. -9
B. 9
C. 0
D. -1
E. 1

## ANS B

7. What is the median of the following list of numbers? $4,5,7,9,10,12$
A. 6
B. 7.5
C. 7.8
D. 8
E. 9

ANS D
8. What is the mathematical average of the number of weeks in a year, seasons in a year, and the number of days in January?
A. 36
B. 33
C. 32
D. 31
E. 29

## ANS E

9. In a college, some courses contribute more towards an overall GPA than other courses. For example, a science class is worth 4 points; mathematics is worth 3 points; history is worth 2 points; and English is worth 3 points. The values of the grade letters are as follows, $\mathrm{A}=4, \mathrm{~B}=3, \mathrm{C}=2, \mathrm{D}=1, \mathrm{~F}=0$. What is the GPA of a student who made a " C " in Trigonometry, a "B" in American History, an "A" in Botany, and a "B" in Microbiology?
A. 2.59
B. 2.86
C. 3.08
D. 3.33
E. 3.67

## ANS C

10. Over the course of a week, Fred spent $\$ 28.49$ on lunch. What was the average cost per day?
A. $\$ 4.07$
B. $\$ 3.57$
C. $\$ 6.51$
D. $\$ 2.93$
E. $\$ 5.41$

## ANS A

11. A roast was cooked at $325^{\circ} \mathrm{F}$ in the oven for 4 hours. The internal temperature rose from $32^{\circ} \mathrm{F}$ to $145^{\circ} \mathrm{F}$. What was the average rise in temperature per hour?
A. $20.2^{\circ} \mathrm{F} / \mathrm{hr}$
B. $28.25^{\circ} \mathrm{F} / \mathrm{hr}$
C. $32.03^{\circ} \mathrm{F} / \mathrm{hr}$
D. $37^{\circ} \mathrm{F} / \mathrm{hr}$
E. $37.29^{\circ} \mathrm{F} / \mathrm{hr}$

ANS B
12. In the number 743.25 which digit represents the tenths space?
A. 2
B. 3
C. 4
D. 5
E. 6

## BASIC OPERATIONS

1. Add $0.98+45.102+32.3333+31+0.00009$
A. 368.573
B. 210.536299
C. 109.41539
D. 99.9975
E. 80.8769543
2. Find $0.12 \div 1$
A. 12
B. 1.2
C. . 12
D. .012
E. . 0012
3. $(9 \div 3) \times(8 \div 4)=$
A. 1
B. 6
C. 72
D. 576
E. 752
4. $6 \times 0 \times 5$
A. 30
B. 11
C. 25
D. 0
E. 27
$5.7 .95 \div 1.5$
A. 2.4
B. 5.3
C. 6.2
D. 7.3
E. 7.5
5. $-32+7$ equals:
A. -25
B. 25
C. -26
D. 26
E. 27
6. $-37+-47$ equals:
A. 64
B. -84
C. 65
D. -75
E. -66
7. $41 \%$ equals:
A. 4.1 B .
.41 C.
.041 q D.
.0041 E.
. 00415

Answer Key

1. C
2. C
3. B
4. D
5. B
6. A
7. B

## 8. B

## COMMAS

1. For the Thanksgiving reunion, relatives were sitting in the dining room, on the porch, and in the carport.
A. Thanksgiving, reunion
B. Were, sitting
C. Porch and
D. No error
2. Lydia seems to be a kind, considerate girl.
A. Seems, to
B. Considerate, girl
C. Kind considerate
D. No error
3. This fishing pole Nathan, has seen better days.
A. Pole, Nathan,
B. Has, seen
C. Nathan,
D. No error
4. My cousin has moved to 56 Central Street Narragansett, Rhode Island 02882.
A. Has moved,
B. Central Street,
C. 56, Central
D. No error
5. The badger, a shy animal sometimes makes friends with a coyote.
A. Sometimes, makes
B. Friends, with
C. A shy animal,
D. No error
6. After the death of Blackbeard, the famous pirate, piracy disappeared from the coast of the American colonies.
A. The famous pirate
B. After the death,
C. Coast, of
D. No error
7. "Silent Night" was written by two men from the village of Oberndorf Austria.
A. men, from
B. Silent Night,
C. Oberndorf, Austria
D. No error
8. On November 19, 1929 Admiral Richard E. Byrd flew the Floyd Bennett to the base of the Queen Maud Mountains.
A. Base, of
B. The, Queen
C. 1929,
D. no error
9. Oh I forgot to bring the cookies.
A. Oh,
B. I , forgot
C. To, bring
D. No error
10. "The boy in the kayak," whispered Sue "is the new football captain."
A. Boy, in the
B. New, football
C. Whispered Sue,
D. No error

Answer Key

1. D
2. D
3. A
4. B
5. C
6. D
7. C
8. C
9. A
10. C

## ESTIMATION SEQUENCE

1. Describe the following sequence in mathematical terms. 144, 72, 36, 18, 9
A. Descending arithmetic sequence
B. Ascending arithmetic sequence
C. Descending geometric sequence
D. Ascending geometric sequence
E. Miscellaneous sequence
2. Which of the following is not a whole number followed by its square?
A.1,1
B. 6,36
C. 8,64
D. 10,100
E. 11,144
3. A nurse has to record her temperatures in Celsius but her thermometer reads Fahrenheit. A patient's temperature is $100.7^{\circ} \mathrm{F}$. What is the temperature in ${ }^{\circ} \mathrm{C}$ ?
A. $32^{\circ} \mathrm{C}$
B. $36.5^{\circ} \mathrm{C}$
C. $38.2^{\circ} \mathrm{C}$
D. $213.3^{\circ} \mathrm{C}$
E. $223.7^{\circ} \mathrm{C}$
4. Art realized that he had 2 more quarters than he had originally thought in his pocket. If all of the change in his pocket is quarters and it totals to $\$ 8.75$, how many quarters did he originally think were in his pocket?
A. 27
B. 29
C. 31
D. 33

## E. 35

5. There are 12 more apples than oranges in a basket of 36 apples and oranges. How many apples are in the basket?
A. 12
B. 15
C. 24
D. 28
E. 36
6. Which of the following correctly identifies 4 consecutive odd integers where the sum of the middle two integers is equal to 24 ?
A. $5,7,9,11$
B. $7,9,11,13$
C. $9,11,13,15$
D. $11,13,15,17$
E. $13,15,17,19$
7. What is the next number in the sequence? $6,12,24,48$,
A. 72
B. 96
C. 108
D. 112
E. 124
8. Which of the following numbers could be described in the following way: an integer that is a natural, rational and whole number?
A. 0
B. 1
C. 2.33
D. -3
E. none of the above
9. What is the next number in the following pattern? $1,1 / 2,1 / 4,1 / 8$,
A. $1 / 10$
B. $1 / 12$
C. $1 / 14$
D. $1 / 15$
E. $1 / 16$
10. Of the following units, which would be most likely to measure the amount of sugar needed in a recipe for 2 dozen cookies
A. degrees Celsius
B. milliliters
C. quarts
D. kilograms
E. cups

Answer Key

1. C
2. E
3. C
4. D
5. C
6. C
7. B
8. B
9. E
10. E

## FRACTIONS AND SQUARE ROOT

1. What is the improper fraction or mixed number represented by the following figure?
A. $21 / 3$
B. $7 / 6$
C. $25 / 8$
D. $11 / 3$
E. $11 / 9$
2. Which of the following fractions most correctly depicts the shaded area of the circle below?
A. $3 / 8$
B. $5 / 8$
C. $3 / 4$
D. $5 / 11$
E. $1 / 2$
3. Which of the following is not a fraction equivalent to $3 / 4$ ?
A. $6 / 8$
B. $9 / 12$
C. $12 / 18$
D. $21 / 28$
E. $27 / 36$
4. Solve: $0.25+0.65$ A. $1 / 2$
B. $9 / 10$
C. $4 / 7$
D. $2 / 9$
E. $5 / 16$
5. Which of the following statements is false?
A. In the fraction $1 / 2$, one is the numerator.
B. When 4.89 is rounded to the ones place, the answer is 5 .
C. Ten thousandths place is located 5 places to the right of the decimal
D. $7 / 6$ is described as an improper fraction.
E. $331 / 3 \%$ is equivalent to
6. Find the square of $25 / 9$ A. $5 / 3$
B. $3 / 5$
C. 7 58/81
D. $15 / 2$
E. 650/81
7. Sarah needs to make a cake and some cookies. The cake requires $3 / 8$ cup of sugar and the cookies require $3 / 5$ cup of sugar. Sarah has $15 / 16$ cups of sugar. Does she have enough sugar, or how much more does she need?
A. She has enough sugar.
B. She needs $1 / 8$ of a cup of sugar.
C. She needs $3 / 80$ of a cup of sugar.
D. She needs $4 / 19$ of a cup of sugar.
E. She needs $1 / 9$ of a cup of sugar.
8. There are 8 ounces in a $1 / 2$ pound. How many ounces are in $73 / 4 \mathrm{lbs}$ ?
A. 12 ounces
B. 86 ounces
C. 119 ounces
D. 124 ounces
E. 138 ounces
9. If the value of $x$ and $y$ in the following fraction are both tripled, how does the value of the fraction change? XZ

Y
A. increases by half
B. decreases by half
C. triples
D. doubles
E. remains the same
10. Which of the following fractions is the equivalent of $0.5 \% \mathrm{~A} .1 / 20$
B. $1 / 200$
C. $1 / 2000$
D. $1 / 5$
E. $1 / 500$
11. Which of these numbers is a factor of 21
A. 2
B. 5
C. 7
D. 42
E. 44
12. If the average person drinks 8 , ( 8 oz ) glasses of water per day, a person who drinks 12.8 oz of water after a morning exercise session has consumed what fraction of the daily average?
A. $1 / 3$
B. $1 / 5$
C. $1 / 7$
D. $1 / 9$
E. $1 / 10$
13. You need $4 / 5$ cups of water for a recipe. You accidentally put $1 / 3$ cups into the mixing bowl with the dry ingredients. How much more water in cups do you need to add?
A. $1 / 3$ cups
B. $2 / 3$ cups
C. $1 / 15$ cups
D. $7 / 15$ cups
E. $\quad 7 / 16$ cups $14.3 / 4-1 / 2=$
A. $1 / 4$
B. $1 / 3$
C. $1 / 2$
D. $2 / 3$
E. $2 / 5$
$15.71 / 2-53 / 8=$ A. $11 / 2$
B. $12 / 3$
C. $21 / 8$
D. $31 / 4$
E. 3

Answer Key

1. C
2. B
3. C
4. B
5. C
6. C
7. C
8. D
9. E
10. B
11. C
12. B
13. D
14. A
15. C

## GEOMETRY

. Which of the following letters represents the vertex in the following picture?
A. D and E
B. E and H
C. F and G
D. G only
E. H only
2. If a circle has the diameter of 8 , what is the circumference?
A. 6.28
B. 12.56
C. 25.13
D. 50.24
E. 100.48
3. What is the area of the triangle below?
A. 22 cm 2
B. 33 cm 2
C. $\quad 44 \mathrm{~cm} 2$
D. 50 cm 2
E. $\quad 66 \mathrm{~cm} 2$
4. What is the measure of the solid line angle depicted by the following figure?
A. 90 degrees
B. 180 degrees
C. 225 degrees
D. 270 degrees
E. 0 degrees
5. What is the measure of angle B in the following figure if angle A measures $135^{\circ}$ ?
A. $40^{\circ}$
B. $45^{\circ}$
C. $50^{\circ}$
D. $135^{\circ}$
E. $225^{\circ}$

Answer Key

1. E
2. C
3. B
4. D
5. B

## GRAPHS

1. In the following figure, what is the area of the shaded circle inside of the square?
A. 512
B. 256
C. 16
D. 50.24
E. 12.57
2. In the figure below, determine the area of the shaded region of the figure.
A. 9.354
B. 10.52
C. 16.437
D. 49
E. 104.86
3. What are the coordinates of point A on the following graph?
A. $(-3,-4)$
B. $(-4,3)$
C. $(3,-4)$
D. $(-4,-3)$
E. $(3,4)$
4. What was the average number of babies that Dr. Jones delivered each year from 1995 to 1998?
A. 35
B. 40
C. 45
D. 50
E. 55
5. How many babies did Dr. Jones deliver in 1998?
A. 25
B. 35
C. 45
D. 55
E. 65
6. If Dr. Jones delivered 85 babies in 1999, how many rattles would represent this number?
A. $61 / 2$
B. 7
C. $\quad 71 / 2$
D. 8
E. $81 / 2$
7. If XYZ Auto Company sold 23,000 vehicles in 1999, how many were SUV's?
A. 2,990
B. 3,030
C. 3,450
D. 4,760
E. 4,775
8. If 7,650 trucks were sold in 1999, how many total vehicles were sold in 1999 by XYZ Auto Company?
A. 35,000
B. 40,000
C. 45,000
D. 50,000
E. 55,000
9. If 3,750 2-door sedans were sold in 1999, then how many 4-door sedans were sold in 1999 by XYZ Auto Company?
A. 3,578
B. 4,950
C. 5,120
D. 5,670
E. 5,845
10. How much did the infant gain in the first month of life?
A. 6 ounces
B. 12 ounces
C. 15 ounces
D. 8 lbs 8 ounces
E. $\quad 9 \mathrm{lbs} 4$ ounces
11. What was the average weight of the infant from April to October, rounded to the nearest ounce?
A. $\quad 10 \mathrm{lbs}$
B. 10 lbs 5 ounces
C. 10 lbs 9 ounces
D. 11 lbs 5 ounces
E. $\quad 11 \mathrm{lbs} 9$ ounces
12. Between which two months did the infant gain the most weight?
A. April and May
B. June and July
C. July and August
D. August and September
E. September and October
13. In the graph below, no axes or origin is shown. If point B 's coordinates are $(10,3)$, which of the following coordinates would most likely be A's?
A. $(17,-2)$
B. $(10,6)$
C. $(6,8)$
D. $(-10,3)$
E. $(-2,-17)$
14. How many boys attended the 1995 convention?
A. 358
B. 390
C. 407
D. 540
E. 716
15. Which year did the same number of boys and girls attend the conference?
A. 1995
B. 1996
C. 1997
D. 1998
E. None
16. Which two years did the least number of boys attend the convention?
A. 1995 and 1996
B. 1995 and 1998
C. 1996 and 1997
D. 1996 and 1992
E. 1997 and 1998

## Answer Key

1. E
2. B
3. C
4. C
5. D
6. E
7. A
8. C
9. B
10. B
11. C

## 12. D

13. C
14. A
15. A
16. A

## BASIC GRAMMAR

1. Everyone in the bank-including the manager and the tellers, ran to the door when the fire alarm rang.
A. tellers, ran
B. tellers:ran
C. tellers, had run
D. tellers-ran
E. tellers' ran"
2. To no ones surprise, Joe didn't have his homework ready.
A. no ones surprise
B. noones surprise
C. no-ones surprise
D. no ones' surprise
E. no one's surprise
3. If he would have read "The White Birds," he might have liked William Butler Yeats's poetry.
A. would have read
B. could have read
C. would of read
D. could of read
E. had read
4. After the hurricane, uprooted trees were laying all over the ground.
A. were laying
B. lying
C. were lying
D. were laid
E. was laid
5. Ralph Waldo Emerson (1803-1882), the great Transcendentalist philosopher, wrote in his essay "Self- Reliance" of the need for an individual to develop his capacities.
A. essay "Self-Reliance"
B. essay, "Self-Reliance"
C. essay: Self-Reliance
D. essay, Self-Reliance
E. essay; "Self-Reliance"
6. The recently built children's amusement park has been called " a boon to the community " by its supporters and "an eyesore" by its harshest critics.
A. and "an eyesore" by its harshest
B. and, " an eyesore," by its harshest
C. and, an eyesore; by its harshest
D. and-an eyesore- by its' harshest
E. and-"an eyesore"- by its' harshest
7. I always have trouble remembering the meaning of these two common verbs, affect (to change" or "to influence") and effect ("to cause" or " to accomplish ) ."
A. "to accomplish )."
B. " to accomplish").
C. "to accomplish).
D. To accomplish.
E. (" to accomplish. ")
8. My class just finished reading- " The Fall of the House of Usher ", a short story by Edgar Allen Poe.
A. reading- " The Fall of the House of Usher",
B. reading, The Fall of the House of Usher,
C. reading "The Fall of the House of Usher, "
D. reading, The Fall of the house of Usher, "
E. reading: The Fall of the House of Usher-
9. After it was repaired it ran perfect again.
A. ran perfect
B. ran perfectly
C. could run perfect
D. could of run perfect
E. would run perfectly
10. "Are there two e's in beetle," asked Margo?
A. there two e's in beetle," asked Margo?
B. their two e's in beetle?" asked Margo.
C. there two e's in beetle," asked Margo?
D. there two e's in beetle?" asked Margo.
E. there two e's in beetle, asked Margo?
11. The circus audience received a well-deserved round of applause for the perfectly timed acrobatic stunt.
A. audience received a well-deserved
B. audience gave a well deserved
C. audience did receive a well deserved
D. audience gave a well-deserved
E. audience did get a well-deserved
12. Looking directly at me, my Mother said, " These are your options: the choice is yours."
A. Mother said, " These are your options: the choice is
B. Mother said- these are your options, the choice is
C. Mother had said, These are your options; the choice is
D. Mother had said, "These are your options; the choice is
E. Mother said, "These are your options; the choice is
13. Porcupine is from Latin porcus, "pig," and spina, "spine."
A. porcus, "pig," and spina, "spine."
B. Porcus-pig and spina, "spine."
C. Porcus-pig, and Spina, "spine."
D. Porcus-Pig-,Spina-spine.
E. Porcus, "pig," and spina "spine".
14. Seeing the dolphins, some sharks, a killer whale, and a Moray eel made the visit to the marine park worthwhile.
A. a killer whale, and a Moray eel made the visit
B. a killer whale, and a moray eel made the visit
C. a killer whale and a moray eel makes the visit
D. a killer whale and a Moray eel makes the visit
E. a killer whale and a moray eel made the visit
15. Still, the fact that a planet exists outside our solar system encourages hope that other solar systems exist, and in them, perhaps, a planet that does support life.
A. that a planet exists outside our solar system encourages hope that other solar systems exist, and B. that a Planet exists out side our solar system encourages hope that other solar systems exist and
C. could be that a planet exists outside our solar system encourages hope that other solar systems exist, and
D. that a planet exist outside our solar systems encourage hope that other solar systems exist, and
E. that a planet does exists out side our solar system encourages hope that other solar systems exist, and
16. Mail-order shopping can be convenient and timesaving with appropriate precautions, it is safe as well.
A. can be convenient and timesaving
B. can be convenient and timesaving;
C. should be convenient and time saving;
D. could be convenient and time saving;
E. can be convenient and time-saving;
17. Among the many fields of science, no matter what turns you on, there are several fields of study.
A. science, no matter what turns you on,
B. Science, no matter what turns you on,
C. Science, no matter which you chose,
D. Science, no matter which of these you chose-
E. science, no matter which you choose,
18. The fact that boxing is known to cause head injuries and brain damage should lead us to inform the public and push for a ban on boxing.
A. should lead us to inform
B. could lead us to inform
C. should of led us to inform
D. will lead us to inform
E. should have led us to inform,
19. The first part of the test was on chemistry, the second on mathematics, and the third on english.
A. on mathematics, and the third on english.
B. on mathematics; and the third on English.
C. on Mathematics; and the third on English.
D. on mathematics, and the third on English.
E. on mathematics: and the third on English.
20. The Diary of Anne Frank showed a young girl's courage during two years of hiding.
A. showed a young girl's courage
B. shows a young girl's courage
C. did show a young girls courage
D. has shown a young girl's courage
E. showed a young girl's courage
21. In August my parents will be married for twenty-five years.
A. will be married for twenty-five years.
B. shall have been married for twenty-five years.
C. will have been married for twenty-five years.
D. will be married for twenty five years.
E. will have married for twenty-five years.

Answer Key

1. D
2. E
3. E
4. C
5. A
6. A
7. B
8. C
9. B
10. D
11. D
12. E
13. A
14. B
15. A
16. E
17. E
18. A
19. D
20. B
21. C

## INTERMEDIATE GRAMMAR

1. The word boycott derives from the name of Charles C. Boycott, an English land agent in Ireland that was ostracized for refusing to reduce rent.
A. that was ostracized for refusing
B. who was ostracized for refusing
C. which was ostracized for refusing
D. that had been ostracized for refusing
E. who had been ostracized for refusing
2. As a result of his method for early music education, Shinichi Suzuki has been known as one of the world's great violin teachers.
A. has been known as one
B. had been known as one
C. is seen as one
D. is being seen as one
E. has been one
3. Last night the weather forecaster announced that this is the most rainy season the area has had in the past decade.
A. this is the most rainy season the
B. this has been the most rainy season the
C. this was the most rainy season the
D. this is noted as the most rainy season the
E. this is the rainiest season the
4. Although Mandy is younger than her sister, Mandy is the tallest of the two.
A. is the tallest of the
B. is the taller of the
C. has been the taller of the
D. is the most tall of the
E. is the more taller of the
5. When Katherine Hepburn's play came to town, all the tickets had sold out far in advance.
A. had sold out far
B. have sold out far
C. were sold out far
D. had been sold out far
E. had been sold out for
6. The origins of most sports is unknown.
A. sports is unknown
B. sports have been unknown
C. sports are unknown
D. sports has been unknown
E. sports are now unknown
7. Neither of the Smith brothers expect to be drafted by a major league team this year.
A. expect to be drafted
B. expects to be drafted
C. has expected to be drafted
D. is expecting to be drafted
E. was expecting to be drafted
8. Has any of the witnesses been sworn in yet?
A. Has any of the
B. Is any of the
C. Will any of the
D. Are any of the
E. Have any of the
9. The Lusitania sunk on May 7, 1915.
A. sunk
B. did sink
C. was sunk
D. did sank
E. sank
10. Whos in the office now?
A. Whos in
B. Whose in
C. Who is in
D. Who's in
E. Whose' in
11. There are now many kinds of dictionaries, such as a dictionary of synonyms and antonyms, a biographical dictionary, and a geographical dictionary with pronunciations given.
A. with pronunciations given
B. that has pronunciations given
C. with pronunciations' given
D. that have pronunciations given
E. that do have pronunciations given
12. Towering seven hundred feet above the valley floor, Mount Rushmore National Memorial was an impressive site.
A. was an impressive site
B. is a impressive sight
C. is an impressive sight
D. was an impressive sight
E. is an impressive site
13. San Francisco lays southwest of Sacramento.
A. lays southwest
B. has laid southwest
C. is lying southwest
D. lain southwest
E. laid southwest
14. Did they know that Labor Day always came on the first Monday in September?
A. came on
B. comes on
C. has come on
D. had come on
E. has came on
15. Eating, drinking, and to stay up late at night were among her pleasures.
A. to stay up late
B. to remain up late
C. staying up late
D. she liked staying up late
E. trying to stay up late
16. Each night when night came and the temperature fell, my parents lit the fire in the bedroom.
A. and the temperature fell,
B. and that the temperature did fall
C. and that the temperature fell
D. and because the temperature fell
E. and when the temperature fell
17. Francis promised to bring the Papago basket that she bought in Arizona.
A. bought in
B. had bought in
C. has bought in
D. did buy in
E. purchased in
18. He has lain his racquetball glove on the beach.
A. has lain
B. has laid
C. have lain
D. have laid
E. is lying
19. I would have lent you my notes if you would have asked me.
A. would have asked me
B. could of asked
C. could ask
D. had asked
E. had of asked
20. Many scientists are still hoping to have found life on another planet.
A. to have found
B. to find
C. two find
D. to have been found
E. too have found
21. Because she had an astounding memory, Sue has never forgotten an important equation.
A. had an
B. could have had
C. has
D. did have
E. has had

## Answer Key

1. B
2. C
3. E
4. B
5. D
6. C
7. B
8. E
9. E
10. D
11. A
12. C
13. E
14. B
15. C
16. E
17. B
18. B
19. D
20. B
21. C

## ADVANCE GRAMMAR

1. David was known for belching; and telling inappropriate jokes in public.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
2. Graduation from High School is considered by many a momentous occasion.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
3. Nurses plays a vital role in the healthcare profession.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
4. After having his tonsels removed, the child was listless for a few days.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
5. The park was serine at twilight.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
6. The patient's mind was lucid during the evaluation?
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
7. The bachalor never married. Most people thought it was because of misogyny.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
8. The intricacy of the mathematical equation, drove the student crazy trying to solve it.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
9. The hybrid tomatoes is immune to most common diseases.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
10. The professor was humiliated when his students reported him to the Dean for verbal abuse.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
11. The con artist hoodwinked the old lady when he sold her fradulent insurance.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
12. The movie star was accused of a misdemeanor, when she stole 15 dollars worth of merchandise from the store.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
13. The congregation sang a comtemporary hymn.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
14. The wound were necrotic when examined.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
15. The defendint exhibited a peevish appearance.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
16. The band director was scheduled to play the piccolo on tuesday.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
17. The renter was remiss; about the rent.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
18. The old man was know for sapient knowledge.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
19. The inventor create several specious ideas to solve the problem.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar
20. The teacher identified the troublemakers, in her classroom.
A. Capitalization
B. Punctuation
C. Spelling
D. Grammar

Answer Key

1. B
2. A
3. D
4. C
5. C
6. B
7. C
8. B
9. D
10. A
11. C
12. B
13. C
14. D
15. C
16. A
17. B
18. D
19. D
20. B

## BASIC MATH

1. An instrument store gives a $10 \%$ discount to all students off the original cost of an instrument. During a back to school sale an additional $15 \%$ is taken off the discounted price. Julie, a student at the local high school, purchases a flute for $\$ 306$. How much did it originally cost?
A. $\$ 325$
B. $\$ 375$
C. $\$ 400$
D. $\$ 408$
E. $\$ 425$
2. If $y(x-1)=z$ then $x=$
A. $y-z$
B. $z / y+1$
C. $y(z-1)$
D. $\mathrm{z}(\mathrm{y}-1)$
E. 1-zy
3. Which of the following values is NOT equal to $34(58+9)$ ?
A. $34 \times 67$
B. $58(34+9)$
C. $34 \times 58+34 \times 9$
D. $1,972+306$
E. $(9+58) 34$
4. Two angles of a triangle measure $15^{\circ}$ and $85^{\circ}$. What is the measure for the third angle?
A. $50^{\circ}$
B. $55^{\circ}$
C. $60^{\circ}$
D. $80^{\circ}$
E. $90^{\circ}$
5. If 5 ounces is equal to 140 grams, then 2 pounds of ground meat is equal to how many grams?
A. 863
B. 878
C. 896
D. 915
E. 932
6. Which year did the most children take swimming lessons?
A. 1990
B. 1991
C. 1992
D. 1994
E. 1995
7. Between which year did the largest decrease in children taking swimming lessons occur?
A. 1990-1991
B. 1991-1992
C. 1992-1993
D. 1993-1994
E. 1994-1995
8. What was the average number of children taking swim lessons from 1990 to 1995 ?
A. 250
B. 308
C. 385
D. 450
E. 1,850
9. Which of the following is equal to $5.93 \times 10-2$ ?
A. 0.0593
B. 0.00593
C. 593
D. 5930
E. 59300
10. On a Map, 1 inch represents 20 miles. The distance between 2 towns is $61 / 5$ inches. How many miles are actually between the two towns?
A. 65 miles
B. 84 miles
C. 124 miles
D. 138 miles
E. $\quad 145$ miles
11. Which of the following is a correct graph of $\mathrm{x}>1, \mathrm{x}<4$ ?
A. Line A
B. Line B
C. Line C
D. Line D
E. Line E
12. How many cubed pieces of fudge that are 3 inches on an edge can be packed into a Christmas tin that is 9 inches deep by 12 inches wide by 8 inches high with the lid still being able to be closed?
A. 18
B. 24
C. 32
D. 36
E. 43
13. Sarah is twice as old as her youngest brother. If the difference between their ages is 15 years. How old is her youngest brother?
A. 10
B. 15
C. 20
D. 25
E. 30
14. Which of the following fractions is equal to $5 / 6$ ?
A. $20 / 30$
B. $15 / 24$
C. $25 / 30$
D. $40 / 54$
E. 2/7
15. What will it cost to tile a kitchen floor that is 12 feet wide by 20 feet long if the tile cost $\$ 8.91$ per square yard?
A. $\$ 224.51$
B. $\$ 237.60$
C. $\$ 246.55$
D. $\$ 271.38$
E. $\$ 282.32$
16. In a writing competition, the first place winner receives $1 / 2$ of the prize money. The second runner up receives $1 / 4$ of what the winner won. What was the total amount of prize money distributed if the winner receives $\$ 6,000$ ?
A. $\$ 6,000$
B. $\$ 8,500$
C. $\$ 12,000$
D. $\$ 15,000$
E. $\$ 18,500$
17. You are lying 120 ft away from a tree that is 50 feet tall. You look up at the top of the tree. Approximately how far is your hear from the top of the tree in a straight line?
A. 50 feet
B. $\quad 75$ feet
C. 120 feet
D. 130 feet
E. 150 feet
18. A cyclist bikes $x$ distance at 10 miles per hour and returns over the same path at 8 miles per hour. What is the cyclist's average rate for the round trip in miles per hour?
A. 8.1
B. 8.3
C. 8.6
D. 8.9
E. 9.0
19. If edging cost $\$ 2.32$ per 12-inch stone, and you want a double layer of edging around your flower bed that is 6 yards by 1 yard. How much will edging you flower bed cost?
A. $\$ 32.48$
B. $\$ 64.96$
C. \$97.44
D. $\$ 129.92$
E. $\$ 194.88$
20. If $3 x=6 x-15$ then $x+8=$
A. 5
B. 10
C. 11
D. 12
E. 13
21. The number of milliliters in 1 liter is A. 10,000
B. 1,000
C. 0.1
D. 0.01
E. 0.001
22. The cost to ride on a ferry is $\$ 5.00$ per vehicle and driver with an additional cost of 50 cents per passenger. If the charge to get on the ferry is $\$ 6.50$, how many people were in the vehicle?
A. 1
B. 2
C. 3
D. 4
E. 5
23. What is $1 / 9$ of 9 ?
A. $1 / 9$
B. 0
C. 1
D. 2
E. 3
24. In his pocket, a boy has 3 red marbles, 4 blue marbles, and 4 green marbles. How many will he have to take out of his pocket to ensure that he has taken out at least one of each color?
A. 3
B. 7
C. 8
D. 9
E. 11
25. Which fraction is equal to $0.20 \%$ ?
A. $1 / 20$
B. $1 / 40$
C. $1 / 50$
D. $1 / 400$
E. 1/500
26. Find the missing term in the following sequence: $4,9,19,79$
A. 36
B. 37
C. 38
D. 39
E. 40
27. How much money did Jessica's budget allow for housing in April of 2001?
A. $\$ 617.80$
B. $\$ 620.92$
C. $\$ 622.50$
D. $\$ 626.38$
E. $\$ 633.20$
28. What was the average amount of money that Jessica's budget allowed for clothing the first six months of 2001?
A. $\$ 249.90$
B. $\$ 250.40$
C. $\$ 251.32$
D. $\$ 253.33$
E. $\$ 255.75$
29. If Jessica only spent $20 \%$ instead of the $25 \%$ allotment for food in May of 2001, how much did she save?
A. $\$ 131.10$
B. $\$ 144.30$
C. $\$ 148.32$
D. $\$ 152.22$
E. $\$ 153.33$
30. Jonathan can type a 20 page document in 40 minutes, Susan can type it in 30 minutes, and Jack can type it in 24 minutes. Working together, how much time will it take them to type the same document?
A. 5 minutes
B. 10 minutes
C. 15 minutes
D. 18 minutes
E. 20 minutes
31. Of the following fractions, which is less than $2 / 3$ ?
A. $7 / 8$
B. 5/6
C. 3/4
D. $3 / 5$
E. 5/7
32. A hockey team won 6 games and lost 8 . What is the ratio of wins to number of games?
A. $6 / 8$
B. $8 / 6$
C. $3 / 7$
D. $8 / 14$
E. 6/7
33. Sue receives a base salary of $\$ 90$ weekly plus a $12 \%$ commission on all sales. Sue had $\$ 3,000$ in sales this week. How much did she make total?
A. $\$ 375$
B. $\$ 450$
C. $\$ 480$
D. $\$ 510$
E. $\$ 525$
34. If the perimeter of a rectangular house is $251 / 3$ yards, and the length is 22 feet. What is the width?
A. 16 feet
B. 35 feet
C. 37 feet
D. 40 feet
E. 42 feet
35. Jimmy made a $15 \%$ profit on the sale of a custom designed boat, and the original cost of the boat was $\$ 15,000$. The boat sold for how much?
A. $\$ 17,250.00$
B. $\$ 16,540.44$
C. $\$ 16,230.34$
D. $\$ 15,980.55$
E. $\$ 15,870.88$
36. A recent study showed that an increase in body weight by 10 kilograms resulted in a $0.15 \%$ increase in heart disease. What fraction is equal to $0.15 \%$ ?
A. $3 / 2000$
B. $2 / 750$
C. $7 / 4000$
D. $5 / 3462$
E. $1 / 500$
37. $6.334 \times 104=$
A. 0.0006334
B. 0.06334
C. 6334
D. 63340
E. 633400
38. If $3 x+5 x=-8$, then $x+1=$
A. -2
B. -1
C. 0
D. 1
E. 2
39. Two angle in a triangle equal $120^{\circ}$. What is the measure of the third angle?
A. $60^{\circ}$
B. $70^{\circ}$
C. $80^{\circ}$
D. $90^{\circ}$
E. $120^{\circ}$
40. Which of the following would be an appropriate unit to measure sugar for a cookie recipe?
A. liters
B. cups
C. quarts
D. kilograms
E. pounds

## Answer Key

1. C
2. B
3. B
4. D
5. C
6. E
7. C
8. B
9. A
10. C
11. A
12. B
13. B
14. C
15. B
16. C
17. D
18. D
19. E
20. E
21. B
22. D
23. C
24. D
25. E
26. D
27. C
28. E
29. A
30. B
31. D
32. C
33. B
34. A
35. A
36. A

## 37. D

38. C
39. A
40. B

## INTERMEDIATE MATH

1.Two angles of a triangle each measure $70^{\circ}$. What is the measure of the third angle in degrees?
A. $40^{\circ}$
B. $80^{\circ}$
C. $100^{\circ}$
D. $120^{\circ}$
E. $140^{\circ}$
2. If Jack needs $21 / 2$ pints of cream to make a dessert. How many pints will he need to make 3 desserts?
A. $21 / 2$
B. 3
C. 4
D. 5
E. $\quad 71 / 2$
3. A discount store takes $50 \%$ off of the retail price of a desk. For the store's holiday sale, it takes an additional $20 \%$ off of all furniture. The desk's retail price was $\$ 320$. How much is the desk on sale for during the holiday sale?
A. $\$ 107$
B. $\$ 114$
C. $\$ 128$
D. $\$ 136$
E. \$192
4. Which vacation destination is most common for the students?
A. Beach
B. Historical Sites
C. Cruises
D. Mountains
E. Other
5. If 500 students attend Washington Middle School, how many are going to the mountains for vacation?
A. 25
B. 60
C. 75
D. 100
E. 125
6. If a $1 / 4$ of a teaspoon is 1 ml , then how many milliliters are in 6 teaspoons?
A. $\quad 10 \mathrm{ml}$
B. $\quad 12.5 \mathrm{ml}$
C. 15 ml
D. 20 ml
E. $\quad 24 \mathrm{ml}$
7. Which of the following is the correct graph for $x \geq 3$ and $x \leq-2$ ?
A. Line A
B. Line B
C. Line C
D. Line D
E. Line E
8. A scale on a map states that every $1 / 4$ of an inch represents 20 miles. If two cities are $31 / 2$ inches apart, how many miles are actually between the two cities?
A. $\quad 14$ miles
B. 20 miles
C. 125 miles
D. 230 miles
E. $\quad 280$ miles
9. Michelle wants to expand her flowerbed by increasing the length and width each by 2 ft . What will the new area of the flowerbed be, if L and W represent the original dimensions of the flowerbed's length and width?
A.2LW
B. $2(\mathrm{~L}+\mathrm{W})$
C. $2 \mathrm{~L}+2 \mathrm{~W}$
D. $(\mathrm{L}+2)(\mathrm{W}+2)$
E. LW/2
10. Melinda's lights went out. She has 3 pairs of red socks in her drawer, 2 pairs of black socks, and 5 pairs of white socks. What is the minimum number of pairs she must remove from the drawer to ensure that she has a pair of each color?
A. 3
B. 5
C. 7
D. 9
E. 10
11. Which of the following fractions are correctly placed from the least in value to the greatest in value?
A. $1 / 4,17 / 25,3 / 4,11 / 16$
B. $17 / 25,1 / 4,11 / 16,3 / 4$
C. $1 / 4,17 / 25,11 / 16,3 / 4$
D. $1 / 4,17 / 25,3 / 4,11 / 16$
E. $3 / 4,17 / 25,11 / 16,1 / 4$
12. What is the mathematical average of the number of days in a typical year, the number of days in a week, and the number of hours in a day?
A. 100
B. 115
C. 132
D. 158
E. 224
13. $1.75 \times 105=$
A. 175,000
B. 17,500
C. 1,750
D. 0.00175
E. 0.000175
14. The electric company charges 3 cents per kilowatt-hour. George used 2800 kilowatthours in April, 3200 kilowatt-hours in May, and 3600 kilowatt-hours in June. What was his average cost of electricity for the 3 months?
A. $\$ 72$
B. $\$ 88$
C. $\$ 96$
D. $\$ 102$
E. $\$ 113$
15. On a map, $1 / 3$ inch equals 15 miles. The distance between two towns on a map is $32 / 3$ inches. How many miles are actually between the two towns?
A. 11
B. 16
C. 88
D. 132
E. 165
16. James invested $\$ 4,000$ at $5 \%$ interest per year; how long will it take him to earn $\$ 200$ in simple interest?

## A. 1 year

B. 2 years
C. 3 years
D. 4 years
E. 5 years
17. John pays $\$ 650$ in property tax. What is the assessed value of his property if property taxes are $1.2 \%$ of assessed value?
A. $\$ 28,800.27$
B. $\$ 41,328.90$
C. $\$ 43,768.99$
D. $\$ 54,166.67$
E. $\$ 64,333.39$
18. A lamp is marked with a sale price of $\$ 23.80$, which is $15 \%$ off of the regular price. What is the regular price?
A. $\$ 26$
B. $\$ 28$
C. $\$ 30$
D. $\$ 32$
E. \$43
19. A mattress store sells their stock for $15 \%$ off of retail. If someone pays cash, they take an additional $10 \%$ off of the discounted price. If a mattress's retail price is $\$ 750$, what is the price after the store discount and the cash discount?
A. $\$ 550.75$
B. $\$ 562.50$
C. $\$ 573.75$
D. $\$ 637.50$
E. $\$ 675.00$
20. $85 \%$ of what number is 136 ?
A. 160
B. 170
C. 180
D. 190
E. 220
21. A building that is 150 ft tall casts a shadow of 20 feet long. At the same time a tree casts a shadow of 2 ft . How tall is the tree?
A. 10
B. 15
C. 20
D. 25
E. 30
22. Which of the following is a true statement?
A. The product of two negative numbers is negative.
B. The product of one negative and one positive number is positive.
C. When dividing a positive number by a negative number, the results are negative.
D. When dividing a negative number by a positive number, the results are positive.
E. When dividing a negative number by a negative number the results are negative.
23. What is the fractional equivalent of $12.5 \%$ ?
A. $1 / 4$
B. $2 / 9$
C. $1 / 5$
D. $1 / 8$
E. $2 / 7$
24. Change $43 / 5$ to an improper fraction.
A. $23 / 5$
B. $7 / 5$
C. $12 / 20$
D. $20 / 12$
E. $12 / 5$
25. The fine for a driver riding in the carpool lane without any passengers is $\$ 133$. A driver is issued a bench warrant for $\$ 2,294.25$, which includes a $15 \%$ fee for late charges and court costs. How many tickets has the driver not paid?
A. 10
B. 12
C. 13
D. 14
E. 15
26. Brett started a race at 6:30 A.M., and he did not cross the finish line until 1:05 P.M. How long did it take for Brett to finish the race?
A. 6 hours and 15 minutes
B. 6 hours and 35 minutes
C. 7 hours and 5 minutes
D. 7 hours and 15 minutes
E. 7 hours and 35 minutes
27. What is the fraction equivalent of the shaded region in the following circle?
A. $2 / 3$
B. $3 / 8$
C. $4 / 5$
D. $3 / 4$
E. 7/16
28. Multiply $2.345 \times 0.023$ A. 0.53935
B. 0.053935
C. 0.0053935
D. 10.195652
E. 101.95652
29. A men's basketball team won 24 games and lost 32 . What is the ratio of games lost to the number of games played?
A. 32:24
B. $4: 3$
C. 3:4
D. $4: 7$
E. 3:7
30. Which of the following choices is equivalent to $5 / 6$ ?
A. $5 / 12$
B. $10 / 6$
C. $20 / 30$
D. $15 / 24$
E. 15/18
31. Jill earns $\$ 120$ for 8 hours of work. At the same pay rate, how much will she earn for 15 hours of work?
A. $\$ 180$
B. $\$ 225$
C. $\$ 245$
D. $\$ 280$
E. $\$ 310$
32. Which two years were the least number of tires sold?
A. 1998 and 1999
B. 1998 and 2000
C. 1998 and 2001
D. 1999 and 2000
E. 2000 and 2001
33. Which year did the store sell $1 / 3$ more tires than the year before?
A. 1998
B. 1999
C. 2000
D. 2001
E. This did not occur during the 4 year span.
34. What was the average number of tires sold by the store from 1998 to 2001 ?
A. 9,000
B. 9,375
C. 9,545
D. 9,770
E. 9,995
35. A salesman sold 20 cars in the month of July, and 40 cars the month of August. What is the percent increase in the number of cars the salesman sold?
A. $50 \%$
B. $100 \%$
C. $150 \%$
D. $200 \%$
E. $250 \%$
36. If one side of a square is 5 units, what is the area of the square?
A. 10
B. 15
C. 20
D. 25
E. 30
37. If $8 x+5=21$, then $3 x+4=$
A. 2
B. 5
C. 10
D. 16
E. $\quad 17$
38. In triangle $\mathrm{ABC}, \mathrm{AB}=\mathrm{BC}$ and ( C 's measure is $65^{\circ}$.) What is the measure of angle B ?
A. $40^{\circ}$
B. $50^{\circ}$
C. $60^{\circ}$
D. $65^{\circ}$
E. $75^{\circ}$
39. If the average arithmetic mean of $8,12,15,21, x$ and 11 is 17 then what is $x$ ?
A. 3
B. 15
C. 17
D. 35
E. 42
40. Sarah has a 20 dollar bill and a 5 dollar bill. If she purchases two items, one for $\$ 11.23$ and the other for
$\$ 8.32$, then how much money does she have left over?
A. $\$ 3.75$
B. $\$ 5.45$
C. $\$ 6.34$
D. $\$ 7.77$
E. $\$ 8.12$

Answer Key

1. A
2. E
3. C
4. A
5. B
6. E
7. D
8. E
9. D
10. D
11. C
12. C
13. A
14. C
15. E
16. A
17. D
18. B
19. C
20. A
21. B
22. C
23. D
24. A
25. E
26. B
27. A
28. B
29. D
30. E
31. B
32. B
33. B
34. B
35. B
36. D
37. C
38. B
39. D

## 40. B

## ADVANCED MATH

1. How long will Lucy have to wait before for her $\$ 2,500$ invested at $6 \%$ earns $\$ 600$ in simple interest?
A. 2 years
B. 3 years
C. 4 years
D. 5 years
E. 6 years
2. Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?
A. 4
B. 8
C. 12
D. 13
E. 16
3. If $r=5 z$ then $15 z=3 y$, then $r=$
A. y
B. 2 y
C. 5 y
D. 10 y
E. $\quad 15 \mathrm{y}$
4. What is $35 \%$ of a number if 12 is $15 \%$ of a number?
A. 5
B. 12
C. 28
D. 33
E. 62
5. A computer is on sale for $\$ 1600$, which is a $20 \%$ discount off the regular price. What is the regular price?
A. $\$ 1800$
B. $\$ 1900$
C. $\$ 2000$
D. $\$ 2100$
E. $\$ 2200$
6. A car dealer sells a SUV for $\$ 39,000$, which represents a $25 \%$ profit over the cost. What was the cost of the SUV to the dealer?
A. $\$ 29,250$
B. $\$ 31,200$
C. $\$ 32,500$
D. $\$ 33,800$
E. $\$ 33,999$
7. After having to pay increased income taxes this year, Edmond has to sell his BMW. Edmond bought the car for $\$ 49,000$, but he sold it for a $20 \%$ loss. What did Edmond sell the car for?
A. $\$ 24,200$
B. $\$ 28,900$
C. $\$ 35,600$
D. $\$ 37,300$
E. $\$ 39,200$
8. If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?
A. 0.8 days
B. $\quad 1.09$ days
C. $\quad 1.23$ days
D. $\quad 1.65$ days
E. $\quad 1.97$ days
9. Find $0.12 \div 12$
A. 100
B. 10
C. 1
D. 0.01
E. 0.001
10. Divide x 5 by x 2
A. x 25
B. x 10
C. x 7
D. x 3
E. x 2.5
11. Which of the following numbers could be described in the following way: an integer that is a natural, rational and whole number?
A. 0
B. 1
C. 2.33
D. -3
E. none of the above
12. Find the mode of the following list of numbers: $2,4,6,4,8,2,9,4,3,8$
A. 2
B. 3
C. 4
D. 5
E. 6
13. In the fraction $3 / \mathrm{x}$, x may not be substituted by which of the following sets?
A. $\{1,2,4\}$
B. $\{-2,-3,-4\}$
C. $\{1,3,7\}$
D. $\{0,10,20\}$
E. $\{1.8,4.3\}$
14. Sarah needs to make a cake and some cookies. The cake requires $3 / 8$ cup of sugar and the cookies require $3 / 5$ cup of sugar. Sarah has $15 / 16$ cups of sugar. Does she have enough sugar, or how much more does she need?
A. She has enough sugar.
B. She needs $1 / 8$ of a cup of sugar.
C. She needs $3 / 80$ of a cup of sugar.
D. She needs $4 / 19$ of a cup of sugar.
E. She needs $1 / 9$ of a cup of sugar.
15. At a company fish fry, $1 / 2$ in attendance are employees. Employees' spouses are $1 / 3$ of the attendance. What is the percentage of the people in attendance who are not employees or employee spouses?
A. $10.5 \%$
B. $16.7 \%$
C. $25 \%$
D. $32.3 \%$
E. $38 \%$
16. In a college, some courses contribute more towards an overall GPA than other courses.

For example, a science class is worth 4 points; mathematics is worth 3 points; History is worth 2 points; and English is worth 3 points. The values of the grade letters are as follows, $A=4, B=3$, $\mathrm{C}=2, \mathrm{D}=1, \mathrm{~F}=0$. What is the GPA of a student who made a " C " in Trigonometry, a " B " in American History, an "A" in Botany, and a "B" in Microbiology?
A. 2.59
B. 2.86
C. 3.08
D. 3.33
E. 3.67
17. There are 8 ounces in a $1 / 2$ pound. How many ounces are in $73 / 4 \mathrm{lbs}$ ?
A. 12 ounces
B. 86 ounces
C. 119 ounces
D. 124 ounces
E. 138 ounces
18. If the value of $x$ and $y$ in the fraction $\mathrm{XZ} / \mathrm{Y}$ are both tripled, how does the value of the fraction change?
A. increases by half
B. decreases by half
C. triples
D. doubles
E. remains the same
19. What is the next number in the following pattern? $1,1 / 2,1 / 4,1 / 8$,
A. $1 / 10$
B. $1 / 12$
C. $1 / 14$
D. $1 / 15$
E. $1 / 16$
20. Of the following units which would be more likely used to measure the amount of water in a bathtub?
A. kilograms
B. liters
C. milliliters
D. centigrams
E. volts
21. If a match box is 0.17 feet long, what is its length in inches the most closely comparable to the following?
A. $51 / 16$ inch highlighter
B. $31 / 8$ inch jewelry box
C. $23 / 4$ inch lipstick
D. $23 / 16$ inch staple remover
E. $\quad 41 / 2$ inch calculator
22. Which of the following fractions is the equivalent of $0.5 \%$ ?
A. $1 / 20$
B. $1 / 200$
C. 1/2000
D. $1 / 5$
E. $1 / 500$
23. In the graph below, no axes or origin is shown. If point B 's coordinates are $(10,3)$, which of the following coordinates would most likely be A's?
A. (17, -2)
B. $(10,6)$
C. $(6,8)$
D. $(-10,3)$
E. $(-2,-17)$
24. Over the course of a week, Fred spent $\$ 28.49$ on lunch. What was the average cost per day?
A. \$4.07
B. $\$ 3.57$
C. $\$ 6.51$
D. $\$ 2.93$
E. $\$ 5.41$
25. Of the following units, which would be most likely to measure the amount of sugar needed in a recipe for 2 dozen cookies?
A. degrees Celsius
B. milliliters
C. quarts
D. kilograms
E. cups
26. Jim has 5 pieces of string. He needs to choose the piece that will be able to go around his 36 -inch waist. His belt broke, and his pants are falling down. The piece needs to be at least 4 inches longer than his waist so he can tie a knot in it, but it cannot be more that 6 inches longer so that the ends will not show from under his shirt. Which of the following pieces of string will work the best?
A. $34 / 5$ feet
B. $\quad 32 / 3$ feet
C. $33 / 8$ feet
D. $31 / 4$ feet
E. $\quad 21 / 2$ feet
27. After purchasing a flat screen television for $\$ 750$, John realizes that he got a great deal on it and wishes to sell it for a $15 \%$ profit. What should his asking price be for the television?
A. $\$ 800.30$
B. $\$ 833.60$
C. $\$ 842.35$
D. $\$ 862.50$
E. $\$ 970.25$
28. If 300 jellybeans cost you $x$ dollars. How many jellybeans can you purchase for 50 cents at the same rate?
A. $150 / \mathrm{x}$
B. 150 x
C. $6 x$
D. $x / 6$
E. 1500 x
29. If 6 is $24 \%$ of a number, what is $40 \%$ of the same number?
A. 8
B. 10
C. 15
D. 20

## E. 25

30. Lee worked 22 hours this week and made $\$ 132$. If she works 15 hours next week at the same pay rate, how much will she make?
A. $\$ 57$
B. $\$ 90$
C. $\$ 104$
D. $\$ 112$
E. $\$ 122$
31. The last week of a month a car dealership sold 12 cars. A new sales promotion came out the first week of the next month and the sold 19 cars that week. What was the percent increase in sales from the last week of the previous month compared to the first week of the next month?
A. $58 \%$
B. $119 \%$
C. $158 \%$
D. $175 \%$
E. $200 \%$
32. If $8 x+5 x+2 x+4 x=114$, the $5 x+3=$
A. 12
B. 25
C. 33
D. 47
E. 86
33. If two planes leave the same airport at 1:00 PM, how many miles apart will they be at 3:00 PM if one travels directly north at 150 mph and the other travels directly west at 200 mph ?
A. 50 miles
B. 100 miles
C. 500 miles
D. 700 miles
E. 1,000 miles
34. What is the cost in dollars to steam clean a room W yards wide and L yards long it the steam cleaners charge 10 cents per square foot?
A. 0.9 WL
B. 0.3 WL
C. 0.1 WL
D. 9 WL
E. $3 W L$
35. Find $8.23 \times 109$
A. 0.00000000823
B. 0.000000823
C. 8.23
D. 8230000000
E. 823000000000
36. During a 5-day festival, the number of visitors tripled each day. If the festival opened on a Thursday with

345 visitors, what was the attendance on that Sunday?
A. 345
B. 1,035
C. 1,725
D. 3,105
E. 9,315
37. Which of the following has the least value?
A. 0.27
B. $1 / 4$
C. $3 / 8$
D. $2 / 11$
E. $11 \%$
38. How many boys attended the 1995 convention?
A. 358
B. 390
C. 407
D. 540
E. 716
39. Which year did the same number of boys and girls attend the conference?
A. 1995
B. 1996
C. 1997
D. 1998
E. None
40. Which two years did the least number of boys attend the convention?
A. 1995 and 1996
B. 1995 and 1998
C. 1996 and 1997
D. 1997 and 1994
E. 1997 and 1998

Answer Key

1. C
2. D
3. A
4. C
5. C
6. B
7. E
8. B
9. D
10. D
11. B
12. C
13. D
14. C
15. B
16. C
17. D
18. E
19. E
20. B
21. D
22. B
23. C
24. A
25. E
26. C
27. D
28. A
29. B
30. B
31. A
32. C
33. C
34. A
35. D
36. E
37. E
38. A
39. A
40. A

## MEASUREMENTS

1. What will it cost to carpet a room with indoor/outdoor carpet if the room is 10 feet wide and 12 feet long? The carpet costs 12.51 per square yard.
A. $\$ 166.80$
B. $\$ 175.90$
C. $\$ 184.30$
D. $\$ 189.90$
E. $\$ 192.20$
2. If the perimeter of a rectangular house is 44 yards, and the length is 36 feet, what is the width of the house?
A. 10 yards
B. 18 yards
C. 28 feet
D. 32 feet
E. 36 yards
3. What is the volume of the following cylinder?
A. 210.91
B. 226.20
C. 75.36
D. 904.32
E. 28.26
4. What is the volume of a cube whose width is 5 inches?
A. 15 cubic inches
B. 25 cubic inches
C. 64 cubic inches
D. 100 cubic inches
E. 125 cubic inches
5. Sally has three pieces of material. The first piece is 1 yd .2 ft .6 in . long, the second piece is 2 yd . 1 ft . 5 in long, and the third piece is 4 yd . 2 ft . 8in long. How much material does Sally have?
A. $\quad 7 \mathrm{yd} .1 \mathrm{ft} .8$ in.
B. 8 yd. 4 ft .4 in .
C. 8 yd. 11 in.
D. $\quad 9$ yd. 7 in.
E. $\quad 10 \mathrm{yd}$.
6. A can's diameter is 3 inches, and its height is 8 inches. What is the volume of the can?
A. 50.30
B. 56.55
C. 75.68
D. 113.04
E. 226.08
7. If the area of a square flowerbed is 16 square feet, then how many feet is the perimeter of the flowerbed?
A. 4
B. 12
C. 16
D. 20
E. 24
8. Of the following units which would be more likely used to measure the amount of water in a bathtub?
A. kilograms
B. liters
C. milliliters
D. centigrams
E. volts
9. If a match box is 0.17 feet long, what is its length in inches the most closely comparable to the following?
A. $51 / 16$ inch highlighter
B. $31 / 8$ inch jewelry box
C. $23 / 4$ inch lipstick
D. $23 / 16$ inch staple remover
E. $41 / 2$ inch calculator
10. What is the cost in dollars to steam clean a room W yards wide and L yards long it the steam cleaners charge 10 cents per square foot?
A. $\quad 0.9 \mathrm{WL}$
B. 0.3 WL
C. 0.1 WL
D. 9 WL
E. 3WL
11. Once inch equals 2.54 cm , How many centimeters tall is a 76- inch man?
A. 20 cm
B. 29.92 cm
C. 193.04 cm
D. 300.04 cm
E. 593.04 cm
12. A room measures $11 \mathrm{ft} \times 12 \mathrm{ft} \mathrm{x} 9 \mathrm{ft}$. What is the volume? A. 1188 ft 3
B. 32 ft 3
C. 120 ft 3
D. 1300 ft 3
E. 1350 ft 3
13. A vitamin's expiration date has passed. It was suppose to contain 500 mg of Calcium, but it has lost 325 mg of Calcium. How many mg of Calcium is left?
A. 135 mg
B. 175 mg
C. 185 mg
D. 200 mg
E. 220 mg
14. You have orders to give a patient 20 mg of a certain medication. The medication is stored 4 mg per $5-\mathrm{mL}$ dose. How many milliliters will need to be given?
A. $\quad 15 \mathrm{~mL}$
B. 20 mL
C. 25 mL
D. $\quad 30 \mathrm{~mL}$
E. $\quad 35 \mathrm{~mL}$
15. You need exactly a 1680 ft 3 aquarium for your fish. At the pet store you see four choices of aquariums, but the volume is not listed. The length, width, and height are listed on the box. Which of the following aquariums would fit your needs?
A. $\quad 12 \mathrm{ft} \mathrm{x} 12 \mathrm{ft} \times 12 \mathrm{ft}$
B. $13 \mathrm{ft} \mathrm{x} 15 \mathrm{ft} \times 16 \mathrm{ft}$
C. $\quad 14 \mathrm{ft} \times 20 \mathrm{ft} \times 6 \mathrm{ft}$
D. $\quad 15 \mathrm{ft} \mathrm{x} 16 \mathrm{ft} \times 12 \mathrm{ft}$
E. $\quad 15 \mathrm{ft} \mathrm{x} 12 \mathrm{ft} \times 12 \mathrm{ft}$
16. One slice of bread is 80 calorie. Approximately how many calories are in $21 / 2$ slices of bread?
A. 140 calories
B. 200 calories
C. 220 calories
D. 240 calories

## E. 260 calories

Answer Key

1. A
2. A
3. B
4. E
5. D
6. B
7. C
8. B
9. D
10. A
11. C
12. A
13. B
14. C
15. C
16. B

## PERCENTS AND RATIOS

1. If a discount of $20 \%$ off the retail price of a desk saves Mark $\$ 45$, how much did he pay for the desk?
A. $\$ 145$
B. $\$ 160$
C. $\$ 180$
D. $\$ 210$
E. $\$ 215$
2. A customer pays $\$ 1,100$ in state taxes on a newly purchased car. What is the value of the car if state taxes are $8.9 \%$ of the value?
A. $\$ 9.765 .45$
B. $\$ 10,876.90$
C. $\$ 12,359.55$
D. $\$ 14,345.48$
E. $\$ 15,745.45$
3. How many years does Steven need to invest his $\$ 3,000$ at $7 \%$ to earn $\$ 210$ in simple interest?
A. 1 year
B. 2 years
C. 3 years
D. 4 years
E. 5 years
4. Sabrina's boss states that she will increase Sabrina's salary from $\$ 12,000$ to $\$ 14,000$ per year if she enrolls in business courses at a local community college. What percent increase in salary will result from Sabrina taking the business courses?
A. $15 \%$
B. $16.7 \%$
C. $17.2 \%$
D. $85 \%$
E. $117 \%$
5. $35 \%$ of what number is 70 ?
A. 100
B. 110
C. 150
D. 175
E. 200
6. What number is $5 \%$ of 2000 ?
A. 50
B. 100
C. 150
D. 200
E. 250
7. What percent of 90 is 27 ?
A. $15 \%$
B. $20 \%$
C. $30 \%$
D. $33 \%$
E. $41 \%$
8. Jim works for $\$ 15.50$ per hour for a health care facility. He is supposed to get a 75 cent per hour raise at one year of service. What will his percent increase in hourly pay be?
A. $2.7 \%$
B. $3.3 \%$
C. $133 \%$
D. $4.8 \%$
E. $105 \%$
9. If 45 is $120 \%$ of a number, what is $80 \%$ of the same number?
A. 30
B. 32
C. 36
D. 38
E. 41
10. How long will Lucy have to wait before her $\$ 2,500$ invested at $6 \%$ earns $\$ 600$ in simple interest?
A. 2 years
B. 3 years
C. 4 years
D. 5 years
E. 6 years
11. What is $35 \%$ of a number if 12 is $15 \%$ of a number?
A. 5
B. 12
C. 28
D. 33
E. 62
12. A computer is on sale for $\$ 1600$, which is a $20 \%$ discount off the regular price. What is the regular price?
A. $\$ 1800$
B. $\$ 1900$
C. $\$ 2000$
D. $\$ 2100$
E. $\$ 2200$
13. A car dealer sells a SUV for $\$ 39,000$, which represents a $25 \%$ markup over the dealer's cost. What was the cost of the SUV to the dealer?
A. $\$ 29,250$
B. $\$ 31,200$
C. $\$ 32,500$
D. $\$ 33,800$
E. \$33,999
14. After having to pay increased income taxes this year, Edmond has to sell his BMW. Edmond bought the car for $\$ 49,000$, but he sold it for a $20 \%$ loss. What did Edmond sell the car for?
A. $\$ 24,200$
B. $\$ 28,900$
C. $\$ 35,600$
D. $\$ 37,300$
E. \$39,200
15. At a company fish fry, $1 / 2$ in attendance are employees. Employees' spouses are $1 / 3$ of the attendance. What is the percentage of the people in attendance who are not employees or employee spouses?
A. $10.5 \%$
B. $16.7 \%$
C. $25 \%$
D. $32.3 \%$
E. $38 \%$
16. If 6 is $24 \%$ of a number, what is $40 \%$ of the same number
A. 8
B. 10
C. 15
D. 20
E. 25
17. $25 \%$ of $400=$
A. 100
B. 200
C. 800
D. 10,000
E. 12,000
18. $22 \%$ of $\$ 900=$
A. 90
B. 198
C. 250
D. 325
E. 375
19. Which of the following percentages is equal to 0.45 ?
A. $0.045 \%$
B. $0.45 \%$
C. $4.5 \%$
D. $45 \%$
E. $0.0045 \%$
20. Which of these percentages equals 1.25 ?
A. $0.125 \%$
B. $12.5 \%$
C. $125 \%$
D. $1250 \%$
E. $1250.5 \%$

Answer Key

1. C
2. C
3. A
4. B
5. E
6. B
7. C
8. D
9. A
10. C
11. C
12. C
13. B
14. E
15. B
16. B
17. A
18. B
19. D
20. C

## BASIC READING COMPREHENSION

1. Questions 1-7.

In the sixteenth century, an age of great marine and terrestrial exploration, Ferdinand Magellan led the first expedition to sail around the world. As a young Portuguese noble, he served the king of Portugal, but he became involved in the quagmire of political intrigue at court and lost the
king's favor. After he was dismissed from service to the king of Portugal, he offered to serve the future Emperor Charles V of Spain.

A papal decree of 1493 had assigned all land in the New World west of 50 degrees W longitude to Spain and all the land east of that line to Portugal. Magellan offered to prove that the East Indies fell under Spanish authority. On September 20, 1519, Magellan set sail from Spain with five ships. More than a year later, one of these ships was exploring the topography of South America in search of a water route across the continent. This ship sank, but the remaining four ships searched along the southern peninsula of South America. Finally they found the passage they sought near a latitude of 50 degrees S. Magellan named this passage the Strait of All Saints, but today we know it as the Strait of Magellan.

One ship deserted while in this passage and returned to Spain, so fewer sailors were privileged to gaze at that first panorama of the Pacific Ocean. Those who remained crossed the meridian we now call the International Date Line in the early spring of 1521 after ninety-eight days on the Pacific Ocean. During those long days at sea, many of Magellan's men died of starvation and disease.

Later Magellan became involved in an insular conflict in the Philippines and was killed in a tribal battle. Only one ship and seventeen sailors under the command of the Basque navigator Elcano survived to complete the westward journey to Spain and thus prove once and for all that the world is round, with no precipice at the edge.

1. The sixteenth century was an age of great exploration.
A. cosmic
B. land
C. mental
D. common man
E. none of the above
2. Magellan lost the favor of the king of Portugal when he became involved in a political
A. entanglement
B. discussion
C. negotiation
D. problems
E. none of the above
3. The Pope divided New World lands between Spain and Portugal according to their location on one side or the other of an imaginary geographical line 50 degrees west of Greenwich that extends in a direction.
A. north and south
B. crosswise
C. easterly
D. south east
E. north and west
4. One of Magellan's ships explored the of South America for a passage across the continent.
A. coastline
B. mountain range
C. physical features
D. islands
E. none of the above
5. Four of the ships sought a passage along a southern .
A. coast
B. inland
C. body of land with water on three sides
D. border
E. answer not available
6. The passage was found near 50 degrees $S$ of .
A. Greenwich
B. The equator
C. Spain
D. Portugal
E. Madrid
7. In the spring of 1521 , the ships crossed the now called the International Date Line.
A. imaginary circle passing through the poles
B. Imaginary line parallel to the equator
C. area
D. land mass
E. answer not found in article

## 8. Questions 8-14

Marie Curie was one of the most accomplished scientists in history. Together with her husband, Pierre, she discovered radium, an element widely used for treating cancer, and studied uranium and other radioactive substances. Pierre and Marie's amicable collaboration later helped to unlock the secrets of the atom.

Marie was born in 1867 in Warsaw, Poland, where her father was a professor of physics. At the early age, she displayed a brilliant mind and a blithe personality. Her great exuberance for learning prompted her to continue with her studies after high school. She became disgruntled, however, when she learned that the university in Warsaw was closed to women. Determined to receive a higher education, she defiantly left Poland and in 1891 entered the Sorbonne, a French university, where she earned her master's degree and doctorate in physics.

Marie was fortunate to have studied at the Sorbonne with some of the greatest scientists of her day, one of whom was Pierre Curie. Marie and Pierre were married in 1895 and spent many productive years working together in the physics laboratory. A short time after they discovered radium, Pierre was killed by a horse- drawn wagon in 1906. Marie was stunned by this horrible misfortune and endured heartbreaking anguish. Despondently she recalled their close relationship and the joy that they had shared in scientific research. The fact that she had two young daughters to raise by herself greatly increased her distress.

Curie's feeling of desolation finally began to fade when she was asked to succeed her husband as a physics professor at the Sorbonne. She was the first woman to be given a professorship at the world- famous university. In 1911 she received the Nobel Prize in chemistry for isolating radium. Although Marie Curie eventually suffered a fatal illness from her long exposure to radium, she never became disillusioned about her work. Regardless of the consequences, she had dedicated herself to science and to revealing the mysteries of the physical world.
8. The Curies' collaboration helped to unlock the secrets of the atom.
A. friendly
B. competitive
C. courteous
D. industrious
E. chemistry
9. Marie had a bright mind and a personality.
A. strong
B. lighthearted
C. humorous
D. strange
E. envious
10. When she learned that she could not attend the university in Warsaw, she felt
A. hopeless
B. annoyed
C. depressed
D. worried
E. none of the above
11. Marie by leaving Poland and traveling to France to enter the Sorbonne.
A. challenged authority
B. showed intelligence
C. behaved
D. was distressed
E. answer not available in article
12. she remembered their joy together.
A. Dejectedly
B. Worried
C. Tearfully
D. Happily
E. Sorrowfully
13. Her began to fade when she returned to the Sorbonne to succeed her husband.
A. misfortune
B. anger
C. wretchedness
D. disappointment
E. ambition
14. Even though she became fatally ill from working with radium, Marie Curie was never
A. troubled
B. worried
C. disappointed
D. sorrowful
E. disturbed
15. Questions 15-19.

Mount Vesuvius, a volcano located between the ancient Italian cities of Pompeii and Herculaneum, has received much attention because of its frequent and destructive eruptions. The most famous of these eruptions occurred in A. D. 79.

The volcano had been inactive for centuries. There was little warning of the coming eruption, although one account unearthed by archaeologists says that a hard rain and a strong wind had disturbed the celestial calm during the preceding night. Early the next morning, the volcano poured a huge river of molten rock down upon Herculaneum, completely burying the city and filling in the harbor with coagulated lava.

Meanwhile, on the other side of the mountain, cinders, stone and ash rained down on Pompeii. Sparks from the burning ash ignited the combustible rooftops quickly. Large portions of the city were destroyed in the conflagration. Fire, however, was not the only cause of destruction. Poisonous sulphuric gases saturated the air. These heavy gases were not buoyant in the atmosphere and therefore sank toward the earth and suffocated people.

Over the years, excavations of Pompeii and Herculaneum have revealed a great deal about the behavior of the volcano. By analyzing data, much as a zoologist dissects a specimen animal, scientist have concluded that the eruption changed large portions of the area's geography. For
instance, it turned the Sarno River from its course and raised the level of the beach along the Bay of Naples. Meteorologists studying these events have also concluded that Vesuvius caused a huge tidal wave that affected the world's climate.

In addition to making these investigations, archaeologists have been able to study the skeletons of victims by using distilled water to wash away the volcanic ash. By strengthening the brittle bones with acrylic
paint, scientists have been able to examine the skeletons and draw conclusions about the diet and habits of the residents. Finally, the excavations at both Pompeii and Herculaneum have yielded many examples of classical art, such as jewelry made of bronze, which is an alloy of copper and tin.

The eruption of Mount Vesuvius and its tragic consequences have provided us with a wealth of data about the effects that volcanoes can have on the surrounding area. Today volcanologists can locate and predict eruptions, saving lives and preventing the destruction of cities and cultures.

Herculaneum and its harbor were buried under lava.
A. liquid
B. solid
C. flowing
D. gas
E. answer not available
16. The poisonous gases were not in the air.
A. able to float
B. visible
C. able to evaporate
D. invisible
E. able to condense
17. Scientists analyzed data about Vesuvius in the same way that a zoologist a specimen.
A. describes in detail
B. studies by cutting apart
C. photographs
D. chart
E. answer not available
18. have concluded that the volcanic eruption caused a tidal wave.
A. Scientist who study oceans
B. Scientist who study atmospheric conditions
C. Scientist who study ash
D. Scientist who study animal behavior
E. Answer not available in article
19. Scientist have used water to wash away volcanic ash from the skeletons of victims.
A. bottled
B. volcanic
C. purified
D. sea
E. fountain
20. Questions 20-24.

Conflict had existed between Spain and England since the 1570s. England wanted a share of the wealth that Spain had been taking from the lands it had claimed in the Americas.

Elizabeth I, Queen of England, encouraged her staunch admiral of the navy, Sir Francis Drake, to raid Spanish ships and towns. Though these raids were on a small scale, Drake achieved dramatic success, adding gold and silver to England's treasury and diminishing Spain's omnipotence.

Religious differences also caused conflict between the two countries. Whereas Spain was Roman Catholic, most of England had become Protestant. King Philip II of Spain wanted to claim the throne and make England a Catholic country again. To satisfy his ambition and also to retaliate against England's theft of his gold and silver, King Philip began to build his fleet of warships, the Armada, in January 1586.

Philip intended his fleet to be indestructible. In addition to building new warships, he marshaled one hundred and thirty sailing vessels of all types and recruited more than nineteen thousand robust soldiers and eight thousand sailors. Although some of his ships lacked guns and others lacked ammunition, Philip was convinced that his Armada could withstand any battle with England.

The martial Armada set sail from Lisbon, Portugal, on May 9,1588, but bad weather forced it back to port. The voyage resumed on July 22 after the weather became more stable.

The Spanish fleet met the smaller, faster, and more maneuverable English ships in battle off the coast of Plymouth, England, first on July 31 and again on August 2. The two battles left Spain vulnerable, having lost several ships and with its ammunition depleted. On August 7, while the Armada lay at anchor on the French side of the Strait of Dover, England sent eight burning ships into the midst of the Spanish fleet to set it on fire. Blocked on one side, the Spanish ships could only drift away, their crews in panic and disorder. Before the Armada could regroup, the English attacked again on August 8.

Although the Spaniards made a valiant effort to fight back, the fleet suffered extensive damage. During the eight hours of battle, the Armada drifted perilously close to the rocky coastline. At
the moment when it seemed that the Spanish ships would be driven onto the English shore, the wind shifted, and the Armada drifted out into the North Sea. The Spaniards recognized the superiority of the English fleet and returned home, defeated.

Sir Francis Drake added wealth to the treasury and diminished Spain's
A. unlimited power
B. unrestricted growth
C. territory
D. treaties
E. answer not available in article
21. Philip recruited many soldiers and sailors.
A. warlike
B. strong
C. accomplished
D. timid
E. non experienced
22. The Armada set sail on May 9, 1588.
A. complete
B. warlike
C. independent
D. isolated
E. answer not available
23. The two battles left the Spanish fleet .
A. open to change
B. triumphant
C. open to attack
D. defeated
E. discouraged
24. The Armada was on one side.
A. closed off
B. damaged
C. alone
D. circled
E. answer not available in this article
25. Questions 25-29.

The victory of the small Greek democracy of Athens over the mighty Persian empire in 490 B. C. is one of the most famous events in history. Darius, king of the Persian empire, was furious because Athens had interceded for the other Greek city-states in revolt against Persian domination. In anger the king sent an enormous army to defeat Athens. He thought it would take drastic steps to pacify the rebellious part of the empire. Persia was ruled by one man.

In Athens, however, all citizens helped to rule. Ennobled by this participation, Athenians were prepared to die for their city-state. Perhaps this was the secret of the remarkable victory at Marathon, which freed them from Persian rule. On their way to Marathon, the Persians tried to fool some Greek city-states by claiming to have come in peace. The frightened citizens of Delos refused to believe this. Not wanting to abet the conquest of Greece, they fled from their city and did not return until the Persians had left. They were wise, for the Persians next conquered the city of Etria and captured its people.

Tiny Athens stood alone against Persia. The Athenian people went to their sanctuaries. There they prayed for deliverance. They asked their gods to expedite their victory. The Athenians refurbished their weapons and moved to the plain of Marathon, where their little band would meet the Persians. At the last moment, soldiers from Plataea reinforced the Athenian troops.

The Athenian army attacked, and Greek citizens fought bravely. The power of the mighty Persians was offset by the love that the Athenians had for their city. Athenians defeated the Persians in archery and hand combat. Greek soldiers seized Persian ships and burned them, and the Persians fled in terror. Herodotus, a famous historian, reports that 6400 Persians died, compared with only 192 Athenians.

Athens had _ the other Greek city-states against the Persians.
A. refused help to
B. intervened on behalf of
C. wanted to fight
D. given orders for all to fight
E. defeated
26. Darius took drastic steps to the rebellious Athenians.
A. weaken
B. destroy
C. calm
D. placate
E. answer not available
27. Their participation to the Athenians.
A. gave comfort
B. gave honor
C. gave strength
D. gave fear
E. gave hope
28. The people of Delos did not want to the conquest of Greece.
A. end
B. encourage
C. think about
D. daydream about
E. answer not available
29. The Athenians were by some soldiers who arrived from Plataea.
A. welcomed
B. strengthened
C. held
D. captured
E. answer not available
30. Questions 30-32.

The Trojan War is one of the most famous wars in history. It is well known for the ten-year duration, for the heroism of a number of legendary characters, and for the Trojan horse. What may not be familiar, however, is the story of how the war began.

According to Greek myth, the strife between the Trojans and the Greeks started at the wedding of Peleus, King of Thessaly, and Thetis, a sea nymph. All of the gods and goddesses had been invited to the wedding celebration in Troy except Eris, goddesses of discord. She had been omitted from the guest list because her presence always embroiled mortals and immortals alike in conflict.

To take revenge on those who had slighted her, Eris decided to cause a skirmish. Into the middle of the banquet hall, she threw a golden apple marked "for the most beautiful." All of the goddesses began to haggle over who should possess it. The gods and goddesses reached a stalemate when the choice was narrowed to Hera, Athena, and Aphrodite. Someone was needed to settle the controversy by picking a winner. The job eventually fell to Paris, son of King Priam of Troy, who was said to be a good judge of beauty.

Paris did not have an easy job. Each goddess, eager to win the golden apple, tried aggressively to bribe him.
"I'll grant you vast kingdoms to rule, " promised Hera. "Vast kingdoms are nothing in comparison with my gift," contradicted Athena. "Choose me and I'll see that you win victory and fame in war." Aphrodite outdid her adversaries, however. She won the golden apple by offering Helen, Zeus' daughter and the most beautiful mortal, to Paris. Paris, anxious to claim Helen, set off for Sparta in Greece.

Although Paris learned that Helen was married, he accepted the hospitality of her husband, King Menelasu of Sparta, anyway. Therefore, Menelaus was outraged for a number of reasons when Paris departed, taking Helen and much of the king's wealth back to Troy. Menelaus collected his loyal forces and set sail for Troy to begin the war to reclaim Helen.

Eris was known for both mortals and immortals.
A. scheming against
B. involving in conflict
C. feeling hostile toward
D. ignoring
E. comforting
31. Each goddess tried to bribe Paris.
A. boldly
B. effectively
C. secretly
D. carefully
E. answer not stated
32. Athena Hera, promising Paris victory and fame in war.
A. denied the statement of
B. defeated
C. agreed with
D. restated the statement
E. questioned the statement
33. Questions 33-37.

One of the most intriguing stories of the Russian Revolution concerns the identity of Anastasia, the youngest daughter of Czar Nicholas II. During his reign over Russia, the Czar had planned to revoke many of the harsh laws established by previous czars. Some workers and peasants, however, clamored for more rapid social reform. In 1918 a group of these people, known as Bolsheviks, overthrew the government. On July 17 or 18, they murdered the Czar and what was thought to be his entire family.

Although witnesses vouched that all the members of the Czar's family had been executed, there were rumors suggesting that Anastasia had survived. Over the years, a number of women claimed to be Grand Duchess Anastasia. Perhaps the best -known claimant was Anastasia Tschaikovsky, who was also known as Anna Anderson.

In 1920, eighteen months after the Czar's execution, this terrified young woman was rescued from drowning in a Berlin river. She spent two years in a hospital, where she attempted to reclaim her health and shattered mind. The doctors and nurses thought that she resembled Anastasia and questioned heer about her background. She disclaimed any connection with the Czar's family.

Eight years later, though, she claimed that she was Anastasia. She said that she had been rescued by two Russian soldiers after the Czar and the rest of her family had been killed. Two brothers named Tschaikovsky had carried her into Romania. She had married one of the brothers, who had taken her to Berlin and left her there, penniless and without a vocation. Unable to invoke the aid of her mother's family in Germany, she had tried to drown herself.

During the next few years, scores of the Czar's relatives, ex-servants, and acquaintances interviewed her. Many of these people said that her looks and mannerisms were evocative of the Anastasia that they had known. Her grandmother and other relatives denied that she was the real Anastasia, however.

Tried of being accused of fraud, Anastasia immigrated to the United States in 1928 and took the name Anna Anderson. She still wished to prove that she was Anastasia, though, and returned to Germany in 1933 to bring suit against her mother's family. There she declaimed to the court, asserting that she was indeed Anastasia and deserved her inheritance.

In 1957, the court decided that it could neither confirm nor deny Anastasia's identity. Although we will probably never know whether this woman was the Grand Duchess Anastasia, her search to establish her identity has been the subject of numerous books, plays, and movies.

Some Russian peasants and workers for social reform.
A. longed
B. cried out
C. begged
D. hoped
E. thought much
34. Witnesses that all members of the Czar's family had been executed.
A. gave assurance
B. thought
C. hoped
D. convinced some
E. answer not stated
35. Tschaikovsky any connection with the Czar's family.
A. denied
B. stopped
C. noted
D. justified
E. answer not stated
36. She was unable to the aid of her relative.
A. locate
B. speak about
C. call upon
D. identify
E. know
37. In court she maintaining that she was Anastasia and deserved her inheritance.
A. finally appeared
B. spoke forcefully
C. testified
D. gave evidence
E. answer not stated
38. Questions 38-39.

King Louis XVI and Queen Marie Antoinette ruled France from 1774 to 1789, a time when the country was fighting bankruptcy. The royal couple did not let France's insecure financial situation limit their immoderate spending, however. Even though the minister of finance repeatedly warned the king and queen against wasting money, they continued to spend great fortunes on their personal pleasure. This lavish spending greatly enraged the people of France. They felt that the royal couple bought its luxurious lifestyle at the poor people's expense.

Marie Antoinette, the beautiful but exceedingly impractical queen, seemed uncaring about her subjects; misery. While French citizens begged for lower taxes, the queen embellished her palace with extravagant works of art. She also surrounded herself with artists, writers, and musicians, who encouraged the queen to spend money even more profusely.

While the queen's favorites glutted themselves on huge feasts at the royal table, many people in France were starving. The French government taxed the citizens outrageously. These high taxes paid for the entertainments the queen and her court so enjoyed. When the minister of finance tried to stop these royal spendthrifts, the queen replaced him. The intense hatred that the people felt for Louis XVI and Marie Antoinette kept building until it led to the French Revolution. During this time of struggle and violence (1789-1799), thousands of aristocrats, as well as the king and queen themselves, lost their lives at the guillotine.

Perhaps if Louis XVI and Marie Antoinette had reined in their extravagant spending, the events that rocked France would not have occurred.

The people surrounding the queen encouraged her to spend money .
A. wisely
B. abundantly
C. carefully
D. foolishly
E. joyfully
39. The minister of finance tried to curb these royal
A. aristocrats
B. money wasters
C. enemies
D. individuals
E. spenders
40. Questions 40-45.

Many great inventions are greeted with ridicule and disbelief. The invention of the airplane was no exception. Although many people who heard about the first powered flight on December 17,1903, were excited and impressed, others reacted with peals of laughter. The idea of flying an aircraft was repulsive to some people. Such people called Wilbur and Orville Wright, the inventors of the first flying machine, impulsive fools.

Negative reactions, however, did not stop the Wrights. Impelled by their desire to succeed, they continued their experiments in aviation.

Orville and Wilbur Wright had always had a compelling interest in aeronautics and mechanics. As young boys they earned money by making and selling kites and mechanical toys. Later, they designed a newspaper- folding machine, built a printing press, and operated a bicycle-repair shop. In 1896, when they read about the death of Otto Lilienthal, the brother's interest in flight grew into a compulsion.

Lilienthal, a pioneer in hang-gliding, had controlled his gliders by shifting his body in the desired direction. This idea was repellent to the Wright brothers, however, and they searched for more efficient methods to control the balance of airborne vehicles. In 1900 and 1901, the Wrights tested numerous gliders and developed control techniques. The brothers' inability to obtain enough lift power for the gliders almost led them to abandon their efforts.

After further study, the Wright brothers concluded that the published tables of air pressure on curved surfaces must be wrong. They set up a wind tunnel and began a series of experiments with model wings. Because of their efforts, the old tables were repealed in time and replaced by the first reliable figures for air pressure on curved surfaces. This work, in turn, made it possible for them to design a machine that would fly. In 1903 the Wrights built their first airplane, which cost less than one thousand dollars. They even designed and built their own source of propulsiona lightweight gasoline engine. When they started the engine on December 17, the airplane pulsated wildly before taking off. The plane managed to stay aloft for twelve seconds, however, and it flew one hundred twenty feet.

By 1905 the Wrights had perfected the first airplane that could turn, circle, and remain airborne for half an hour at a time. Others had flown in balloons or in hang gliders, but the Wright brothers were the first to build a full-size machine that could fly under its own power. As the contributors of one of the most outstanding engineering achievements in history, the Wright brothers are accurately called the fathers of aviation.

The idea of flying an aircraft was to some people.
A. boring
B. distasteful
C. exciting
D. needless
E. answer not available
41. People thought that the Wright brothers had
A. acted without thinking
B. been negatively influenced
C. been too cautious
D. had not given enough thought
E. acted in a negative way
42. The Wright's interest in flight grew into a
A. financial empire
B. plan
C. need to act
D. foolish thought
E. answer not in article
43. Lilenthal's idea about controlling airborne vehicles was the Wrights.
A. proven wrong by
B. opposite to the ideas of
C. disliked by
D. accepted by
E. opposed by
44. The old tables were and replaced by the first reliable figures for air pressure on curved surfaces.
A. destroyed
B. canceled
C. multiplied
D. discarded
E. not used
45. The Wrights designed and built their own source of _
A. force for moving forward
B. force for turning around
C. turning
D. force to going backward
E. none of the above

Answer Key

1. B
2. A
3. A
4. C
5. C
6. B
7. A
8. A
9. B
10. B
11. A
12. A
13. C
14. C
15. B
16. A
17. B
18. B
19. C
20. A
21. B
22. B
23. C
24. A
25. B
26. C
27. B
28. B
29. B
30. B
31. A
32. A
33. B
34. A
35. A
36. C
37. B

## 38. B

39. B
40. B
41. A
42. C
43. C
44. B
45. A

## READING FOR THE MAIN IDEA

1. Americans have always been interested in their Presidents' wives. Many First Ladies have been remembered because of the ways they have influenced their husbands. Other First Ladies have made the history books on their own.

At least two First Ladies, Bess Truman and Lady Bird Johnson, made it their business to send signals during their husbands' speeches. When Lady Bird Johnson thought her husband was talking too long, she wrote a note and sent it up to the platform. It read, "It's time to stop!" And he did. Once Bess Truman didn't like what her husband was saying on television, so she phoned him and said," If you can't talk more politely than that in public, you come right home."

Abigail Fillmore and Eliza Johnson actually taught their husbands, Millard Fillmore and Andrew Johnson, the thirteenth and seventeenth Presidents. A schoolteacher, Abigail eventually married her pupil, Millard. When Eliza Johnson married Andrew, he could not read or write, so she taught him herself.

It was First Lady Helen Taft's idea to plant the famous cherry trees in Washington, D. C. Each spring these blossoming trees attract thousands of visitors to the nation's capital. Mrs. Taft also
influenced the male members of her family and the White House staff in a strange way: she convinced them to shave off their beards!

Shortly after President Wilson suffered a stroke, Edith Wilson unofficially took over most of the duties of the Presidency until the end of her husband's term. Earlier, during World War I, Mrs. Wilson had had sheep brought onto the White House lawn to eat the grass. The sheep not only kept the lawn mowed but provided wool for an auction sponsored by the First Lady. Almost $\$ 100,000$ was raised for the Red Cross.

Dolly Madison saw to it that a magnificent painting of George Washington was not destroyed during the War of 1812. As the British marched toward Washington, D. C., she remained behind to rescue the painting, even after the guards had left. The painting is the only object from the original White House that was not burned.

One of the most famous First Ladies was Eleanor Roosevelt, the wife of President Franklin D. Roosevelt. She was active in political and social causes throughout her husband's tenure in office. After his death, she became famous for her humanitarian work in the United Nations. She made life better for thousands of needy people around the world.

What is the main idea of this passage?
A. The Humanitarian work of the First Ladies is critical in American government.
B. Dolly Madison was the most influential president's wife.
C. Eleanor Roosevelt transformed the First Lady image.
D. The First Ladies are important in American culture.
E. The First Ladies are key supporters of the Presidents.
2. Of the many kinds of vegetables grown all over the world, which remains the favorite of young and old alike? Why, the potato, of course.

Perhaps you know them as "taters," "spuds," or "Kennebees," or as "chips," "Idahoes," or even "shoestrings." No matter, a potato by any other name is still a potato- the world's most widely grown vegetable. As a matter of fact, if you are an average potato eater, you will put away at least a hundred pounds of them each year.

That's only a tiny portion of the amount grown every year, however. Worldwide, the annual potato harvest is over six billion bags- each bag containing a hundred pounds of spuds, some of them as large as four pounds each. Here in the United States, farmers fill about four hundred million bags a year. That may seem like a lot of "taters," but it leaves us a distant third among world potato growers. Polish farmers dig up just over 800 million bags a year, while the Russians lead the world with nearly 1.5 billion bags.

The first potatoes were grown by the Incas of South America, more than four hundred years ago. Their descendants in Ecuador and Chile continue to grow the vegetable as high as fourteen thousand feet up in the Andes Mountains. ( That's higher than any other food will grow.) Early Spanish and English explorers shipped potatoes to Europe, and they found their way to North America in the early 1600s.

People eat potatoes in many ways-baked, mashed, and roasted, to name just three. However, in the United States most potatoes are devoured in the form of French fries. One fast-food chain alone sells more than $\$ 1$ billion worth of fries each year. No wonder, then, that the company pays particular attention to the way its fries are prepared.

Before any fry makes it to the people who eat at these popular restaurants, it must pass many separate tests. Fail any one and the spud is rejected. To start with, only russet Burbank potatoes are used. These Idaho potatoes have less water content than other kinds, which can have as much as eighty percent water. Once cut into "shoestrings" shapes, the potatoes are partly fried in a secret blend of oils, sprayed with liquid sugar to brown them, steam dried at high heat, then flash frozen for shipment to individual restaurants.

Before shipping, though, every shoestring is measured. Forty percent of a batch must be between two and three inches long. Another forty percent has to be over three inches. What about the twenty percent that are left in the batch? Well, a few short fries in a bag are okay, it seems.

So, now that you realize the enormous size and value of the potato crop, you can understand why most people agree that this part of the food industry is no "small potatoes."

What is the main idea of this passage?
A. Potatoes from Ireland started the Potato Revolution.
B. The average American eats 50 lbs of potatoes a year.
C. French fries are made from potatoes.
D. Potatoes are a key vegetable in America.
E. The various terms for potatoes have a long history.
3. What does the word patent mean to you? Does it strike you as being something rather remote from your interests? If it does, stop and think a moment about some of the commonplace things that you use every day, objects that you take for granted as part of the world around you. The telephone, radio, television, the automobile, and the thousand and one other things (even the humble safety pin) that enrich our lives today once existed only as ideas in the minds of men. If it had not been possible to patent their ideas and thus protect them against copying by others, these inventions might never have been fully developed to serve mankind.

If there were no patent protection there would be little incentive to invent and innovate, for once the details of an invention became known, hordes of imitators who did not share the inventor's risks and expenses might well flood the market with their copies of his product and reap much of the benefit of his efforts. The technological progress that has made America great would wither rapidly under conditions such as these.

The fundamental principles in the U. S. patent structure came from England. During the glorious reign of Queen Elizabeth I in England, the expanding technology was furthered by the granting of exclusive manufacturing and selling privileges to citizens who had invented new processes or tools- a step that did much to encourage creativity. Later, when critics argued that giving monopoly rights to one person infringed on the rights of others, an important principle was added to the patent structure: The Lord Chief Justice of England stated that society had everything to gain and nothing to lose by granting exclusive privileges to an inventor, because a patent for an invention was granted for something new that society never had before.

Another basic principle was brought into law because certain influential people in England had managed to obtain monopoly control over such age-old products as salt, and had begun charging as much as the traffic would bear. The public outcry became so great that the government was forced to decree that monopoly rights could be awarded only to those who created or introduced
something really unique. These principles are the mainstays of our modern patent system in the United States.

In colonial times patent law was left up to the separate states. The inconsistency, confusion, and unfairness that resulted clearly indicated the need for a uniform patent law, and the men who drew up the Constitution incorporated one. George Washington signed the first patent law on April 10,1790, and less than four months later the first patent was issued to a man named Samuel Hopkins for a chemical process, an improved method of making potash for use in soapmaking.

In 1936 the Patent Office was established as a separate bureau. From the staff of eight that it maintained during its first year of operation it has grown into an organization of over 2500 people handling more than 1600 patent applications and granting over 1000 every week.

The Patent Office in Washington, D. C., is the world's largest library of scientific and technical data, and this treasure trove of information is open for public inspection. In addition to more than 3 million U. S. patents, it houses more than 7 million foreign patents and thousands of volumes of technical literature. Abraham Lincoln patented a device to lift steam vessels over river shoals, Mark Twain developed a self-pasting scrapbook, and millionaire Cornelius Vanderbilt invented a shoe-shine kit.

A patent may be granted for any new and useful process, machine, article of manufacture, or composition of matter ( a chemical compound or combinations of chemical compounds), or any distinct and new variety; of plant, including certain mutants and hybrids.

The patent system has also helped to boost the wages of the American worker to an unprecedented level; he can produce more and earn more with the computer, adding machines, drill press or lathe. Patented inventions also help keep prices down by increasing manufacturing efficiency and by stimulating the competition that is the foundation of our free enterprise system.

The decades of history have disclosed little need for modification of the patent structure. Our patent laws, like the Constitution from which they grew, have stood the test of time well. They encouraged the creative processes, brought untold benefits to society as a whole, and enabled American technology to outstrip that of the rest of the civilized world.

What is the main idea of this passage?
A. The patent system encourages free enterprise.
B. The Constitution protects the patent system.
C. The patent system in England has been influential in American patent development.
D. Patents are important tools for inventors.
E. Patented inventions protect the inventor, free enterprise, and the creative process.
4. Most people think it's fine to be "busy as a beaver." Little do they know. Beavers may work hard, but often they don't get much done.

Beavers are supposed to be great tree cutters. It is true that a beaver can gnaw through a tree very quickly. (A six-inch birch takes about ten minutes.) But then what? Often the beaver does not make use of the tree. One expert says that beavers waste one out of every five trees they cut.

For one thing, they do not choose their trees wisely. One bunch of beavers cut down a cottonwood tree more than one hundred feet tall. Then they found that they could not move it.

In thick woods a tree sometimes won't fall down. It gets stuck in the other trees. Of course, doesn't think to cut down the trees that are in the way. So a good tree goes to waste.

Some people think that beavers can make a tree fall the way they want it to. Not true. (In fact, a beaver sometimes gets pinned under a falling tree.) When beavers cut a tree near a stream, it usually falls into the water. But they do not plan it that way. The fact is that most trees lean toward the water to start with.

Now what about dam building? Most beaver dams are wonders of engineering. The best ones are strongly built of trees, stones, and mud. They are wide at the bottom and narrow at the top.

Beavers think nothing of building a dam more than two hundred feet long. One dam, in Montana, was more than two thousand feet long. The largest one ever seen was in New Hampshire. It stretched four thousand feet. It made a lake large enough to hold forty beaver homes.

So beavers do build good dams. But they don't always build them in the right places. They just don't plan. They will build a dam across the widest part of the stream. They don't try to find a place where the stream is narrow. So a lot of their hard work is wasted.

Beavers should learn that it's not enough to be busy. You have to know what you're doing, too. For example, there was one Oregon beaver that really was a worker. It decided to fix a leak in a man-made dam. After five days of work it gave up. The leak it was trying to block was the lock that boats go through.

What is the main idea of this passage?
A. Beavers may be hard working animals, but they don't always choose the most efficient mechanisms.
B. Beavers are excellent dam builders.
C. New Hampshire was the site of the largest beaver dam.
D. Beavers are well developed tree cutters.
E. Beavers are poor surveyors of aquatic environments in some cases.
5. The raisin business in America was born by accident. It happened in 1873 in the San Joaquin Valley of California. Many farmers raised grapes in this valley. That year, just before the grape harvest, there was a heat wave. It was one of the worst heat waves ever known. It was so hot the grapes dried on the vines. When they were picked, California had its first raisin crop.

People were surprised to find how good raisins were. Everybody wanted more. So the San Joaquin farmers went into the raisin business. Today, of course, they do not let the grapes dry on the vines. They treat them with much more care.

In late August the grapes start to ripen. They are tested often for sweetness. The growers wait until the sugar content is twenty-one percent. Then they know the grapes are ripe enough to be picked.

Skilled workers come to the vineyards. They pick the bunches of grapes by hand. The workers fill their flat pans with grapes. They gently empty the pans onto squares of paper. These squares lie between the long rows of vines. They sit in the sun.

Here the grapes stay while the sun does its work. It may take two weeks or longer. The grapes are first dried on one side. When they have reached the right color, they are turned to dry on the other side. The grapes are dried until only fifteen percent of the moisture is left. Then they have turned into raisins.

The raisins are rolled up in the paper on which they have dried. Trucks take them from the fields They are poured into big boxes called sweatboxes. Each box holds one hundred and sixty pounds of raisins. Here, any raisins that are a bit too dry take moisture from those that have a bit too much. After a while they are all just moist enough.

The big boxes are trucked next to the packaging plant. They are emptied onto a conveyor belt that shakes the raisins gently. This knocks them from their stems. A blast of air whisks the stems away. The water bath is next. Then the plump brown raisins have a last inspection. They are again checked for moisture and sugar.

Then they go on a belt to packing machines. Here they are poured into packages, which are automatically weighed and sealed. The raisins are now ready for market.

What is the main idea of this passage?
A. The creation of raisins in America was an accident.
B. The process of raisin development requires multiple steps.
C. Raisins on the grocery store shelf undergo a brief fermentation process.
D. Raisins are cleaned thoroughly at the packing plant.
E. California has been the leader in American raisin development.
6. In 1976, Sichan Siv was crawling through the jungle, trying to escape from Cambodia. By 1989, however, Siv was working in the White House, in Washington D. C., as an advisor to the President of the United States. How did this strange journey come about?

Like millions of Cambodians, Siv was a victim of a bloody civil war. One of the sides in this war was the Cambodian government. The other was a group called the Khmer Rouge. When the Khmer Rouge won the war, the situation in Cambodia got worse. Many people were killed, while others were forced into hard labor. Sometimes entire families were wiped out.

Siv came from a large family that lived in the capital of Cambodia. After finishing high school, Siv worked for a while with a Cambodian airline company. Later, he taught English. After that, he took a job with CARE, an American group that was helping victims of the war.

Siv had hope to leave Cambodia before the Khmer Rouge took over the country. Unfortunately, he was delayed. As a result, he and his family were taken from their homes and forced to labor in rice fields. After a while, Siv managed to escape. He rode an old bicycle for miles, trying to reach Thailand where he would be free and safe. For three weeks he slept on the ground and tried to hide from the soldiers who were looking for him. Caught at last, he was afraid he would be killed. Instead, he was put into a labor camp, where he worked eighteen hours each day without rest. After several months, he escaped again; this time he made it. The journey, however, was a terrifying one. After three days of staggering on foot through mile after mile of thick bamboo, Siv finally made his way to Thailand.

Because he had worked for an American charity group, Siv quickly found work in a refugee camp. Soon he was on his way to the states. He arrived in June of 1976 and got a job-first picking apples and then cooking in a fast-food restaurant. Siv, however, wanted more than this; he wanted to work with people who, like himself, had suffered the hardship of leaving their own countries behind. Siv decided that the best way to prepare for this kind of work was to go to college. He wrote letters to many colleges and universities. They were impressed with his school records from Cambodia, and they were impressed with his bravery. Finally, in 1980, he was able to study at Columbia University in New York City. After finishing his studies at Columbia, Siv took a job with the United Nations. He married an American woman and became a citizen. After several more years, he felt that he was very much a part of his new country.

In 1988, Siv was offered a job in the White House working for President Reagan's closest advisors. It was a difficult job, and he often had to work long hours. However the long hard work was worth it, because Siv got the opportunity to help refugees in his work.

What is the main idea of this passage?
A. Persistence and courage are global ideas.
B. Siv covered a large area during his life.
C. Siv persevered to become an American citizen
D. Siv overcame numerous challenges to come to American and help others.
E. Siv persevered to become an American citizen.
7. When you want to hang the American flag over the middle of a street, suspend it vertically with the blue field, called the union, to the north and east-west street. When the flag is displayed with another banner from crossed staffs, the American flag is on the right. Place the staff of the American flag in front of the other staff. Raise the flag quickly and lower it slowly and respectfully. When flying the flag at half-mast, hoist it to the top of the pole for a moment before lowering it to mid-pole. When flying the American flag with banners from states or cities, raise the nation's banner first and lower it last. Never allow the flag to touch the ground.

What is the main idea of this passage?
A. The American flag is the symbol of American freedom.
B. The American flag has fifty stars.
C. Placing the American flag inappropriately will draw government intervention.
D. American flag should be flown differently in certain situations. ","The flag should be lowered quickly and respectfully.
8. What if someone told you about a kind of grass that grows as tall as the tallest trees? A grass that can be made as strong as steel? A grass from which houses, furniture, boats, and hundreds of other useful things can be made? A grass that you would even enjoy eating? Would you believe that person? You should, for that grass is bamboo, the "wood" of 1,001 uses.

Bamboo may look like wood, but it is part of the family of plants that includes wheat, oats, and barley. It is a kind of grass. This grass is not just a material for making useful products. Young bamboo is eaten, often mixed with other vegetables, in many Asian foods.

Bamboo grows in many parts of the world. In the United States it grows in an area from Virginia west to Indiana and south to Florida, Louisiana, and Texas. Most bamboo, however, is found in warm, wet climates, especially in Asia and on the islands of the South Pacific Ocean.

In most Asian countries, bamboo is nearly as important as rice. Many Asians live in bamboo houses. They sit on bamboo chairs and sleep on bamboo mats. They fence their land with bamboo and use the wood for cages for chickens and pigs.

Bamboo is used to build large buildings as well as homes. When it is glued in layers, it becomes as strong as steel. On some islands in the South Pacific, bamboo is even used for water pipes. This extraordinary material has many other uses. It is used to make musical instruments, such as flutes and recorders. Paper made from bamboo has been highly prized by artists for thousands of years.

Bamboo is light and strong, and it bends without breaking. It is cheap, floats on water, almost never wears out, and is easy to grow. Nothing else on earth grows quite so fast as bamboo. At times you can even see it grow! Botanists have recorded growths of more than three feet in just twenty-four hours! Bamboo is hollow and has a strong root system that almost never stops growing and spreading. In fact, only after it flowers, an event that may happen only once every thirty years, will bamboo die.

There are more than a thousand kinds of bamboo. The smallest is only three inches tall and onetenth of an inch across. The largest reaches more than two hundred feet in height and seven
inches in diameter. No wonder, then, that the lives of nearly half the people on earth would change enormously if there were no longer any bamboo. No wonder, too, that to many people bamboo is a symbol of happiness and good fortune.

What is the main idea of this passage?
A. Bamboo has at least 2,000 uses.
B. Bamboo grows at an amazing rate and is found primarily in Asia.
C. Bamboo is an amazing grass that can be used in multiple ways.
D. There are at least a 1,000 types of bamboo.
E. Bamboo could be considered a flower in some cases.
9. Every year since 1986, some of the world's most daring runners have gathered in the desert of Morocco. They are there to take part in one of the most difficult races in the world. The Marathon of the Sands, as it is called, covers over 125 miles of desert and mountain wilderness. The runners complete the course in fewer than seven days, and they run with their food, clothing, and sleeping bags on their backs.

The Marathon of the Sands was founded in 1986 by Patrick Bauer. His idea was to give the runners, who come from all over the world, a special kind of adventure. Most of the runners in this race have found that they form deep friendships with the other runners during their days and nights in the desert. Facing terrible heat and complete exhaustion, they learn much about themselves and each other.

For most of the runners, though, the challenge of the race is the main reason for coming. On the first day, for example, they run fifteen miles across a desert of sand, rocks, and thorny bushes. Few runners finish the day without blistered and raw feet. They also suffer from a lack of water. (They are allowed less than nine quarts of water during each day of the race.) Most of all, they are exhausted when they arrive at the campsite for the night.

The second day, the runners are up at 6:00 A. M. Within a few hours, it is 100 degrees F, but the runners do not hesitate. They must cover eighteen miles that day. That night, they rest. They must be ready for the next day's run.

On the third day, the runners must climb giant sand dunes- the first they have faced. Dust and sand mix with the runners' sweat. Soon their faces are caked with mud. After fifteen miles of these conditions, the runners finally reach their next camp.

The race continues like this for four more days. The fourth and fifth days are the worst. On the fourth day, the runners pass through a level stretch and a beautiful, tree-filled oasis, but then, on this and on the next day, they cross more than twenty-one miles of rocks and sand dunes. The temperature soars to 125 degrees F, and many runners cannot make it. Helicopters rush fallen runners to medical help. Runners who make it to the end of the fifth day know that the worst is over.

On the sixth day, heat and rocks punish the racers terribly. In the Valley of Dra, the wind picks up and, as the desert heat is thrust against them with great force, they grow more and more exhausted.

The seventh day is the last, with only twelve miles to be covered. The dusty, tired, blistered runners set out at daybreak. Near the finish line, children race along with the runners, for everybody has caught the excitement. The ones who have run the whole marathon know they have accomplished what most people could not even dream of. "During the hard moments," says one contestant who has raced here twice, "I'd think, 'Why am I here?' Then I'd realize I was there to find my limits."

What is the main idea of this passage?
A. The Marathon of the Sands race tests the limits of human endurance.
B. The runners run at their own pace.
C. The race causes the strong to stumble and the weak to not finish.
D. The seventh day is the hardest day of the race.
E. Every runner runs the race to find their human limits.
10. High in the Andes Mountains in Peru stands the ancient city of Machu Picchu. No one knows why this great city was built, nor is it likely that we will ever know. Nevertheless, the deserted city of Machu Picchu is important for what it reveals about the ancient Inca people of South America.

The Incas once ruled a great empire that covered a large part of the South American continent. The empire was more than five hundred years old when the first Spanish explorers, looking for gold, went to that continent in the sixteenth century.

The Incas were an advanced people. They were skillful engineers who paved their roads and built sturdy bridges. They plowed the land in such a way that rains would not wash away valuable soil. They dug ditches to carry water into dry areas for farming.

Even though they did not know about the wheel, the Incas were able to move huge stone blockssome as heavy as ten tons- up the sides of mountains to build walls. The blocks were fitted so tightly, without cement of any kind, that it would be impossible to slip a knife blade between them! The walls have stood firm through great storms and earthquakes that have destroyed many modern buildings.

The Incas were great artists, too. Today, Incan dishes and other kinds of pottery are prized for their wonderful designs. Since both gold and silver were in great supply, the Incas created splendid objects from these precious metals.

While it is true that the Incas had no written language, they kept their accounts by using a system of knotted strings of various lengths and colors. The sizes of the knots and the distances between them represented numbers.

At its height, the Incan empire included as many as thirty million people. The emperor ruled them with an iron hand. He told his subjects where to live, what to plant, how long they should work-even whom they could marry. Since he owned everything, the emperor gave what he wished when he wished- and in the amount he wished -to his people.

In 1533 Spanish explorers led by Francisco Pizarro murdered the emperor of the Incas. Earlier, the heir to the Incan empire had also been killed. The Incas, who had always been entirely dependent on their emperor, now had no recognized leader. The Spaniards easily conquered the empire and plundered its riches.

Have the Incas disappeared from South America? Not at all. In Peru alone, once the center of that great empire, eighty percent of the twenty million people are descendants of the Inca people. Evidence of the Incan empire can be found in many other places in South America as well. You can even visit Machu Picchu. The remains of this ancient city still stand high in the mountains of Peru, an awesome tribute to this once powerful empire.

What is the main idea of this passage?
A. The Incas once inhabited the ancient city of Machu Picchu.
B. Peru was the primary country of the Incas.
C. The Incan empire can be found in ancient cities and was plundered by the Spanish.
D. Spanish conquerors destroyed the Incan empire in the thirteenth century.
E. Machu Picchu was the capital of the Incan empire.

Answer Key

1. D
2. D
3. E
4. A
5. B
6. D
7. D
8. C
9. A
10. C

## ADVANCE READING COMPREHENSION

1. In 1892 the Sierra Club was formed. In 1908 an area of coastal redwood trees north of San Francisco was established as Muir Woods National Monument. In the Sierra Nevada mountains, a walking trail from Yosemite Valley to Mount Whitney was dedicated in 1938. It is called John Muir Trail.

John Muir was born in 1838 in Scotland. His family name means "moor," which is a meadow full of flowers and animals. John loved nature from the time he was small. He also liked to climb rocky cliffs and walls.

When John was eleven, his family moved to the United States and settled in Wisconsin. John was good with tools and soon became an inventor. He first invented a model of a sawmill. Later he invented an alarm clock that would cause the sleeping person to be tipped out of bed when the timer sounded.

Muir left home at an early age. He took a thousand-mile walk south to the Gulf of Mexico in 1867and 1868. Then he sailed for San Francisco. The city was too noisy and crowded for Muir, so he headed inland for the Sierra Nevadas.

When Muir discovered the Yosemite Valley in the Sierra Nevadas, it was as if he had come home. He loved the mountains, the wildlife, and the trees. He climbed the mountains and even climbed trees during thunderstorms in order to get closer to the wind. He put forth the theory in the late 1860's that the Yosemite Valley had been formed through the action of glaciers. People ridiculed him. Not until 1930 was Muir's theory proven correct.

Muir began to write articles about the Yosemite Valley to tell readers about its beauty. His writing also warned people that Yosemite was in danger from timber mining and sheep ranching interests. In 1901 Theodore Roosevelt became president of the United States. He was interested in conservation. Muir took the president through Yosemite, and Roosevelt helped get legislation passed to create Yosemite National Park in 1906. Although Muir won many conservation battles, he lost a major one. He fought to save the Hetch Valley, which people wanted to dam in order to provide water for San Francisco. In the late 1913 a bill was signed to dam the valley. Muir died in 1914. Some people say losing the fight to protect the valley killed Muir.

What happened first?
A. The Muir family moved to the United States.
B. Muir Woods was created.
C. John Muir learned to climb rocky cliffs.
D. John Muir walked to the Gulf of Mexico
E. Muir visited along the east coast.
2. When did Muir invent a unique form of alarm clock?
A. while the family still lived in Scotland
B. after he sailed to San Francisco
C. after he traveled in Yosemite
D. while the Muir family lived in Wisconsin
E. after he took the long walk
3. What did John Muir do soon after he arrived in San Francisco?
A. He ran outside during an earthquake.
B. He put forth a theory about how Yosemite was formed.
C. He headed inland for the Sierra Nevadas.
D. He began to write articles about the Sierra Nevadas.
E. He wrote short stories for the local newspaper.
4. When did John Muir meet Theodore Roosevelt?
A. between 1901 and 1906
B. between 1838 and 1868
C. between 1906 and 1914
D. between 1868 and 1901
E. between 1906-1907
5. What happened last?
A. John Muir died.
B. John Muir Trail was dedicated.
C. Muir's glacial theory was proven.
D. The Sierra Club was formed.
E. John's family visited him.
6. When using a metal file, always remember to bear down on the forward stroke only. On the return stroke, lift the file clear of the surface to avoid dulling the instrument's teeth. Only when working on very soft metals is it advisable to drag the file's teeth slightly on the return stroke. This helps clear out metal pieces from between the teeth.

It is best to bear down just hard enough to keep the file cutting at all times. Too little pressure uses only the tips of the teeth; too much pressure can chip the teeth. Move the file in straight lines across the surface. Use a vice to grip the work so that your hands are free to hold the file. Protect your hands by equipping the file with a handle. Buy a wooden handle and install it by inserting the pointed end of the file into the handle hole.

These directions show you how to-
A. work with a hammer
B. use a file
C. polish a file
D. oil a vise
E. repair shop tools
7. When using a file-
A. always bear down on the return stroke
B. move it in a circle
C. remove the handle
D. press down on the forward stroke
E. wear protective gloves
8. When working on soft metals, you can-
A. remove the handle
B. clear metal pieces from the teeth
C. bear down very hard on the return stroke
D. file in circles
E. strengthen them with added wood
9. Protect your hands by-
A. dulling the teeth
B. dragging the teeth on the backstroke
C. using a vise
D. installing a handle
E. wearing safety gloves
10. "Old woman," grumbled the burly white man who had just heard Sojourner Truth speak, "do you think your talk about slavery does any good? I don't care any more for your talk than I do for the bite of a flea."

The tall, imposing black woman turned her piercing eyes on him. "Perhaps not," she answered, "but I'll keep you scratching."

The little incident of the 1840s sums up all that Sojourner Truth was: utterly dedicated to spreading her message, afraid of no one, forceful and witty in speech.

Yet forty years earlier, who could have suspected that a spindly slave girl growing up in a damp cellar in upstate New York would become one of the most remarkable women in American history? Her name then was Isabella (many slaves had no last names), and by the time she was fourteen she had seen both parents die of cold and hunger. She herself had been sold several times. By 1827, when New York freed its slaves, she had married and borne five children.

The first hint of Isabella's fighting spirit came soon afterwards, when her youngest son was illegally seized and sold. She marched to the courthouse and badgered officials until her son was returned to her.

In 1843, inspired by religion, she changed her name to Sojourner(meaning "one who stays briefly") Truth, and, with only pennies in her purse, set out to preach against slavery. From New England to Minnesota she trekked, gaining a reputation for her plain but powerful and moving words. Incredibly, despite being black and female (only white males were expected to be public speakers), she drew thousands to town halls, tents, and churches to hear her powerful, deepvoiced pleas on equality for blacks-and for women. Often she had to face threatening hoodlums. Once she stood before armed bullies and sang a hymn to them. Awed by her courage and her commanding presence, they sheepishly retreated.

During the Civil War she cared for homeless ex-slaves in Washington. President Lincoln invited her to the White House to bestow praise on her. Later, she petitioned Congress to help former slaves get land in the West. Even in her old age, she forced the city of Washington to integrate its trolley cars so that black and white could ride together.

Shortly before her death at eighty-six, she was asked what kept her going. "I think of the great things," replied Sojourner.

The imposing black woman promised to keep the white man-
A. searching
B. crying
C. hollering
D. scratching
E. fleeing
11. This incident occurred in the- A. 1760s
B. 1900 s
C. 1840 s
D. 1920 s
E. 1700 s
12. Sojourner Truth was raised in a damp cellar in-
A. New York
B. Georgia
C. New Jersey
D. Idaho
E. Maryland
13. Isabella lost both parents by the time she was-
A. twenty-seven
B. two
C. seven
D. fourteen
E. nineteen
14. When New York freed its slaves, Isabella had-
A. problems
B. no children
C. five children
D. an education
E. three children
15. Her change in name was inspired by-
A. a fighting spirit
B. religion
C. her freedom
D. officials
E. friends
16. She traveled from New England to-
A. Canada
B. California
C. Minnesota
D. Alaska
E. Virginia
17. She forced the city of Washington to-
A. integrate its trolleys
B. give land grants
C. care for ex-slaves
D. provide food for ex-slaves
E. clean its trolleys
18. She preached against-
A. smoking
B. slavery
C. alcohol
D. hoodlums
E. women having no rights
19. Sojourner Truth died at-
A. 48
B. 72
C. 63
D. 86
E. 88
20. The Galapagos Islands are in the Pacific Ocean, off the western coast of South America. They are a rocky, lonely spot, but they are also one of the most unusual places in the world. One reason is that they are the home of some of the last giant tortoises left on earth.

Weighing hundreds of pounds, these tortoises, or land turtles, wander slowly around the rocks and sand of the islands. Strangely, each of these islands has its own particular kinds of tortoises. There are seven different kinds of tortoises on the eight islands, each kind being slightly different from the other.

Hundreds of years ago, thousands of tortoises wandered around these islands. However, all that changed when people started landing there. When people first arrived in 1535, their ships had no refrigerators. This
meant that fresh food was always a problem for the sailors on board. The giant tortoises provided a solution to this problem.

Ships would anchor off the islands, and crews would row ashore and seize as many tortoises as they could. Once the animals were aboard the ship, the sailors would roll the tortoises onto their backs. The tortoises were completely helpless once on their backs, so they could only lie there until used for soups and stews. Almost 100,000 tortoises were carried off in this way.

The tortoises faced other problems, too. Soon after the first ships, settlers arrived bringing pigs, goats, donkeys, dogs and cats. All of these animals ruined life for the tortoises. Donkey and goats ate all the plants that the tortoises usually fed on, while the pigs. Dogs and cats consumed thousands of baby tortoises each year. Within a few years, it was hard to find any tortoise eggsor even any baby tortoises.

By the early 1900s, people began to worry that the last of the tortoises would soon die out. No one, however, seemed to care enough to do anything about the problem. More and more tortoises disappeared, even though sailors no longer needed them for food. For another fifty years, this situation continued. Finally, in the 1950s, scientist decided that something must be done.

The first part of their plan was to get rid of as many cats, dogs and other animals as they could. Next, they tried to make sure that more baby tortoises would be born. To do this, they started looking for wild tortoise eggs. They gathered the eggs and put them in safe containers. When the eggs hatched, the scientists raised the tortoises in special pens. Both the eggs and tortoises were numbered so that the scientists knew exactly which kinds of tortoises they had-and which island they came from. Once the tortoises were old enough and big enough to take care of themselves, the scientists took them back to their islands and set them loose. This slow, hard work continues today, and, thanks to it, the number of tortoises is now increasing every year.

Perhaps these wonderful animals will not disappear after all. What happened first?
A. Sailors took tortoises aboard ships.
B. The tortoise meat was used for soups and stews.
C. Tortoises were put onto their backs.
D. Settlers brought other animals to the islands.
E. Pigs had been all the sailors had to eat.
21. What happened soon after people brought animals to the islands?
A. Tortoise eggs were kept in safe containers.
B. Scientists took away as many animals as they could.
C. The animals ate the tortoises' food and eggs.
D. The tortoises fought with the other animals.
E. The tortoises continued to wander freely.
22. When did people start to do something to save the tortoises?
A. in the 1500 s
B. in the 1950 s
C. in the early 1900 s
D. in the 1960s
E. in the 1400 s
23. What happens right after the tortoise eggs hatch?
A. The scientists take the tortoises back to their islands.
B. The scientists get rid of cats, dogs, and other animals.
C. The sailors use the tortoises for food.
D. The scientist raised the tortoises in special pens.
E. The scientist encouraged the villagers to help.
24. What happened last?
A. The tortoises began to disappear.
B. The number of tortoises began to grow.
C. Scientists took away other animals.
D. Tortoises were taken back to their home islands.
E. The number of tortoises began to decrease.
25. The first person in the group starts off by naming anything that is geographical. It could be a city, state, country, river, lake, or any proper geographical term. For example, the person might say,"Boston." The second person has ten seconds to think of how the word ends and come up with another geographical term starting with that letter. The second participant might say, "Norway," since the geographical term has to start with "N." The third person would have to choose a word beginning with "Y." If a player fails to think of a correct answer within the time limit, that player is out of the game. The last person to survive is the champion.

This game may help you with-
A. history
B. music
C. geography
D. sports
E. current events
26. The person trying to answer needs-
A. no time limit
B. to know geography only
C. to ignore the last letters of words
D. to know something about spelling and geography
E. to be a good speller
27. Before you choose your own word, think about how-
A. the last word starts
B. the last word ends
C. smart you are
D. long the last word is
E. the spelling of the first word
28. The answer must be-
A. in New York
B. within the United States
C. proper geographical terms
D. in the same region
E. along a coast line
29. Charles A. Lindbergh is remembered as the first person to make a nonstop solo flight across the Atlantic, in 1927. This feat, when Lindbergh was only twenty-five years old, assured him a lifetime of fame and public attention.

Charles Augustus Lindbergh was more interested in flying airplanes than he was in studying. He dropped out of the University of Wisconsin after two years to earn a living performing daredevil airplane stunts at country fairs. Two years later, he joined the United States Army so that he could go to the Army Air Service flight-training school. After completing his training, he was hired to fly mail between St. Louis and Chicago. Then came the historic flight across the Atlantic. In 1919, a New York City hotel owner offered a prize of
$\$ 25,000$ to the first pilot to fly nonstop from New York to Paris. Nine St. Louis business leaders helped pay for the plane Lindbergh designed especially for the flight. Lindbergh tested the plane by flying it from San Diego
to New York, with an overnight stop in St. Louis. The flight took only 20 hours and 21 minutes, a transcontinental record.

Nine days later, on May 20,1927, Lindbergh took off from Long Island, New York, at 7:52 A. M. He landed at Paris on May 21 at 10:21 P. M. He had flown more than 3,600 miles in less than thirty four hours. His flight made news around the world. He was given awards and parades everywhere he went. He was presented with the U. S. Congressional Medal of Honor and the first Distinguished Flying Cross. For a long time, Lindbergh toured the world as a U. S. goodwill ambassador. He met his future wife, Anne Morrow, in Mexico, where her father was the United States ambassador.

During the 1930s, Charles and Anne Lindbergh worked for various airline companies, charting new commercial air routes. In 1931, for a major airline, they charted a new route from the east coast of the United States to the Orient. The shortest, most efficient route was a great curve across Canada, over Alaska, and down to China and Japan. Most pilots familiar with the Arctic did not believe that such a route was possible. The Lindberghs took on the task of proving that it was. They arranged for fuel and supplies to be set out along the route. On July 29, they took off from Long Island in a specially equipped small seaplane. They flew by day and each night landed on a lake or a river and camped. Near Nome, Alaska, they had their first serious emergency. Out of daylight and nearly out of fuel, they were forced down in a small ocean inlet. In the next morning's light, they discovered they had landed on barely three feet of water. On

September 19, after two more emergency landings and numerous close calls, they landed in China with the maps for a safe airline passenger route.

Even while actively engaged as a pioneering flier, Lindbergh was also working as an engineer. In 1935, he and Dr. Alexis Carrel were given a patent for an artificial heart. During World War I in the 1940s, Lindbergh served as a civilian technical advisor in aviation. Although he was a civilian, he flew over fifty combat missions in the Pacific. In the 1950s, Lindbergh helped design the famous 747 jet airliner. In the late 1960s, he spoke widely on conservation issues. He died August 1974, having lived through aviation history from the time of the first powered flight to the first steps on the moon and having influenced a big part of that history himself.

What did Lindbergh do before he crossed the Atlantic?
A. He charted a route to China.
B. He graduated from flight-training school.
C. He married Anne Morrow.
D. He acted as a technical advisor during World War II.
E. He was responsible for the fuel supply for planes.
30. What happened immediately after Lindbergh crossed the Atlantic?
A. He flew the mail between St. Louis and Chicago.
B. He left college.
C. He attended the Army flight-training school.
D. He was given the Congressional Medal of Honor.
E. He married Anne Morrow.
31. When did Charles meet Anne Morrow?
A. before he took off from Long Island
B. after he worked for an airline
C. before he was forced down in an ocean inlet
D. after he received the first Distinguished Flying Cross
E. when visiting his parents
32. When did the Lindberghs map an air route to China?
A. before they worked for an airline
B. before Charles worked with Dr. Carrel
C. after World War II
D. while designing the 747
E. when he was thirty
33. What event happened last?
A. Lindbergh patented an artificial heart.
B. The Lindberghs mapped a route to the Orient.
C. Lindbergh helped design the 747 airline.
D. Lindbergh flew fifty combat missions.
E. Charles finally was given an honorary degree from college.
34. Always read the meter dials from the right to the left. This procedure is much easier, especially if any of the dial hands are near the zero mark. If the meter has two dials, and one is smaller than the other, it is not imperative to read the smaller dial since it only registers a small amount. Read the dial at the right first. As the dial turns clockwise, always record the figure the pointer has just passed. Read the next dial to the left and record the figure it has just passed. Continue recording the figures on the dials from right to left. When finished, mark off the number of units recorded. Dials on water and gas meters usually indicate the amount each dial records.

These instructions show you how to -
A. read a meter
B. turn the dials of a meter
C. install a gas meter
D. repair a water meter
E. be prepared for outside employment
35. Always read the meter dials-
A. from top to bottom
B. from right to left
C. from left to right
D. from the small to the large dial
E. from the large dial to the small dial
36. As you read the first dial, record the figures
A. on the smaller dial
B. the pointer is approaching
C. the pointer has just passed
D. at the top
E. at the bottom
37. When you have finished reading the meter, mark off-
A. the number of units recorded
B. the figures on the small dial
C. the total figures
D. all the zero marks
E. the last reading of the month
38. The village of Vestmannaeyjar, in the far northern country of Iceland, is as bright and clean and up-to-date as any American or Canadian suburb. It is located on the island of Heimaey, just off the mainland. One January night in 1973, however, householders were shocked from their sleep. In some backyards red-hot liquid was spurting from the ground. Flaming "skyrockets" shot up and over the houses. The island's volcano, Helgafell, silent for seven thousand years, was violently erupting!

Luckily, the island's fishing fleet was in port, and within twenty-four hours almost everyone was ferried to the mainland. But then the agony of the island began in earnest. As in a nightmare, fountains of burning lava
spurted three hundred feet high. Black, baseball-size cinders rained down. An evil-smelling, eyeburning, throat-searing cloud of smoke and gas erupted into the air, and a river of lava flowed down the mountain. The constant shriek of escaping steam was punctuated by ear-splitting explosions.

As time went on, the once pleasant village of Vestmannaeyjar took on a weird aspect. Its street lamps still burning against the long Arctic night, the town lay under a thick blanket of cinders. All that could be seen above the ten-foot black drifts were the tips of street signs. Some houses had collapsed under the weight of cinders; others had burst into flames as the heat ignited their oil storage tanks. Lighting the whole lurid scene, fire continued to shoot from the mouth of the looming volcano.

The eruption continued for six months. Scientists and reporters arrived from around the world to observe the awesome natural event. But the town did not die that easily. In July, when the eruption ceased, the people of Heimaey Island returned to assess the chances of rebuilding their homes and lives. They found tons of ash covering the ground. The Icelanders are a tough people, however, accustomed to the strange and violent nature of their Arctic land. They dug out their homes. They even used the cinders to build new roads and airport runways. Now the new homes of Heimaey are warmed from water pipes heated by molten lava.

The village is located on the island of-
A. Vestmannaeyjar
B. Hebrides
C. Heimaey
D. Helgafell
E. Heimma
39. The color of the hot liquid was-
A. orange
B. black
C. yellow
D. red
E. gray
40. This liquid was coming from the -
A. mountains
B. ground
C. sea
D. sky
E. ocean
41. The island's volcano had been inactive for-
A. seventy years
B. seven thousand years
C. seven thousand months
D. seven hundred years
E. seventy decades
42. Black cinders fell that were the size of
A. baseballs
B. pebbles
C. golf balls
D. footballs
E. hail-stones
43. Despite the eruption-
A. buses kept running
B. the radio kept broadcasting
C. the police kept working
D. street lamps kept burning
E. the television kept broadcasting
44. This volcanic eruption lasted for six .
A. weeks
B. hours
C. months
D. days
E. years

Answer Key

1. C
2. D
3. C
4. A
5. B
6. B
7. D
8. B
9. D
10. D
11. C
12. A
13. D
14. C
15. B
16. C
17. A
18. B
19. D
20. A
21. C
22. B
23. D
24. B
25. C
26. D
27. B
28. C
29. B
30. D
31. D
32. B
33. C
34. A
35. B
36. C
37. A
38. C
39. D
40. B
41. B
42. A
43. D
44. C

## SENTENCE CORRECTION

1. If the books have been cataloged last week, why haven't they been placed on the shelf?
A. have been cataloged
B. would have been cataloged
C. was cataloged
D. were cataloged
E. had been cataloged
2. Jessica Mitford wrote The American Way of Death, a best-selling book, that led eventually to an official investigation of the funeral industry.
A. that led eventually
B. that had led eventually
C. that eventually led
D. which led eventually
E. who eventually led
3. Sabotage came from the French saboter, which means"to clatter with wooden shoes (sabots)."
A. which means " to
B. which means, " to
C. that means "to
D. that means-"to
E. that means, "to
4. In studying an assignment it is wise to read it over quickly at first, than see the major points, and finally outline the material.
A. first, than
B. first: then
C. first-then
D. first, then
E. first-than
5. To judge the Tidy City contest, we picked an uninterested party.
A. picked an uninterested party.
B. picked an interested party!
C. picked a disinterested party.
D. are in the process of picking an uninterested party.
E. picked an disinterested party.
6. Linda decides they had better scram before the killers find them.
A. had better scram
B. had better leave
C. should hurry and scram
D. could hurry and leave
E. had better get out
7. I really dug the character of Brutus.
A. dug
B. thought about
C. thought of
D. admired
E. gazed at
8. Once upon a point a time, a small person named Little Red Riding Hood initated plans for the preparation, delivery and transportation of foodstuffs to her Grandmother.
A. and transportation of foodstuffs to her Grandmother.
B. and transportation of food stuffs to her Grandmother.
C. and transportation of food supplies to her Grandmother.
D. and transportation of foodstuffs to her grandmother.
E. and, transportation of food supplies to her grand mother.
9. The setting of a story effects the story's plot.
A. effects the story's plot
B. effects the stories plot
C. affect the story's plot
D. affects the story's plot
E. affects the story's plots
10. Arctic trees are scrubbiest than trees in milder climates.
A. scrubbiest than trees
B. scrubbier then trees
C. scrubbiest than are trees
D. scrubbier than are trees
E. scrubbier than trees
11. Quebec rises in a magnificent way above the St. Lawrence River.
A. rises in a magnificent way above
B. rises in a magnificent way, way above
C. rises magnificently above
D. rises magnificently way above
E. is raised in a magnificent way above
12. Someone gives the school gerbils every year.
A. Someone gives the school gerbils
B. Some one gives the school gerbils
C. Some one gives the School gerbils
D. There is a person that gives the school gerbils
E. An individual gave gerbils
13. During Colonial days, a school room looked rather empty.
A. Colonial days, a school room looked
B. Colonial days, a schoolroom looked
C. Colonial Days, a schoolroom looked
D. Colonial Days; a school room looked
E. Colonial days- a schoolroom looked
14. The helium- filled balloon rose in the air.
A. rose in the air.
B. was rising in the air.
C. was in the air.
D. rose into the air.
E. would rise in the air.
15. If I had the address, I would have delivered the package myself.
A. had the address,
B. had the address;
C. had the address-
D. had had the address;
E. had had the address,
16. Do you know that these gloves have lay on the bureau all week?
A. have lay on
B. have laid on
C. would lie on
D. had laid on
E. have lain on
17. If I would have known about the team tryouts, I would have signed up for them.
A. would have known
B. would had known
C. could of known
D. had been told
E. could have been told
18. If he would have revised his first draft, he would have received a better grade.
A. would have revised
B. had revised
C. could of revised
D. had of revised
E. would revise
19. Valarie claims that cats made the best pets.
A. made the best pets.
B. could be the best pets.
C. are the best pets.
D. make of the best pets
E. make the best pets.
20. By next month Ms. Jones will be Mayor of Tallahassee for two years.
A. will be Mayor of Tallahassee
B. will have been Mayor of Tallahassee
C. will be mayor of Tallahassee
D. will have been mayor of Tallahassee
E. could have been mayor of Tallahassee

## Answer Key

1. D
2. D
3. A
4. D
5. C
6. B
7. D
8. D
9. D
10. E
11. C
12. A
13. B
14. D
15. E
16. E
17. A
18. B
19. E
20. D

## SENTENCE CORRECTION 2

1. Hours of driving laid ahead of us.
A. laid
B. have lain
C. lay
D. has lay
E. lie
2. By the time we get to the picnic area, the rain will stop.
A. will stop
B. shall stop
C. will has stopped
D. shall have stopped
E. will have stopped
3. If Judy would not have missed the deadline, the yearbook delivery would have been on time.
A. would not have missed
B. should have not missed
C. wouldn't have missed
D. had not missed
E. would have not missed
4. We spent Sunday afternoon wandering aimless in the park.
A. wandering aimless
B. wandering aimlessly
C. wandering without purpose
D. wandering in an aimless manner
E. wandering almost aimlessly
5. Only after I went home did I remember my dental appointment.
A. went home
B. had went home
C. had gone home
D. gone home
E. should go home
6. The book lay open at page 77 .
A. lay open
B. laid open
C. lied open
D. lain open
E. was laid open
7. By this time next year Johanna will begin classes at the University of Colorado.
A. will begin classes
B. will have begun classes
C. has began classes
D. should begin classes
E. should have begun classes
8. After comparing my air conditioner with the one on sale, I decided that mine was the most efficient.
A. was the most efficient.
B. should be the most efficient.
C. was the more efficient.
D. was, by far the most efficient
E. should be considered the most efficient.
9. I would have liked to have gone swimming yesterday.
A. to have gone swimming
B. to go swimming
C. to had gone swimming
D. to go to swim
E. to of gone swimming
10. I wish I read the chapter before I tried to answer the questions.
A. read the chapter
B. would read the chapter
C. should of read the chapter
D. could have read the chapter
E. had read the chapter
11. Nathanael West said that he'd never have written his satirical novel if he had not visited Hollywood.
A. have written his
B. would have written his
C. could of written his
D. could have written his
E. should of written his
12. The smell from the paper mill laid over the town like a blanket.
A. laid
B. has lain
C. will lie
D. lay
E. has laid
13. When I was halfway down the stairs, I suddenly knew what I had wanted to have said.
A. to have said
B. too say
C. to have been said
D. to had say
E. to say
14. I would be more careful if I had been you.
A. had been
B. could have been
C. was
D. were
E. could have been
15. They read where the governor has appointed a special committee to improve the school calendar.
A. where
B. how
C. that of where
D. of where
E. where-
16. In study hall I sit besides Paul Smith, who is captain of the swim team and one of the best swimmers in the state.
A. sit besides
B. sat beside
C. have set beside
D. sit beside
E. have sit beside
17. This classic has been read with enjoyment for nearly two hundred years.
A. has been read
B. will have been read
C. shall have been read
D. is being read
E. was read
18. Many nineteenth-century biographers rely on their imagination, not on real facts.
A. rely on their imagination,
B. relied on their imagination,
C. have relied on their imagination
D. could have relied on their imagination,
E. could rely on their imaginations:
19. The private lives of politicians, generals, and other notables fascinates the reading public.
A. fascinates the reading
B. have fascinated the reading
C. will fascinate the reading
D. fascinate the reading
E. has fascinate the reading
20. That small man chose a seat near the door and carefully sat down.
A. sat
B. will sit
C. could of sat
D. have sit down
E. set down
21. Last summer I worked in the chemical laboratory at the Brass Company; most the work came into the lab for testing marked with the words top priority .
A. words top priority
B. words-top priority
C. words:Top priority
D. words, " Top Priority."
E. Words "top priority."

Answer Key

1. C
2. E
3. D
4. B
5. C
6. A
7. B
8. C
9. B
10. E
11. A
12. D
13. E
14. D
15. C
16. D
17. A
18. B
19. D
20. A
21. A
