Intermediate Math with Answer Key

1. Two angles of a triangle each measure 70°. What is the measure of the third angle in degrees?

A. 40°
B. 80°
C. 100°
D. 120°
E. 140°

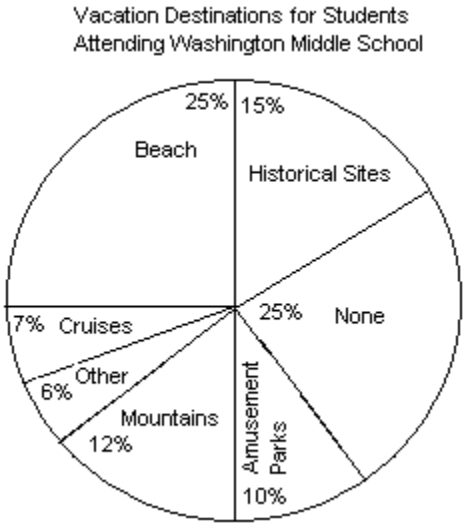
2. If Jack needs 2 ½ pints of cream to make a dessert. How many pints will he need to make 3 desserts?

A. 2 ½
B. 3
C. 4
D. 5
E. 7 ½

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

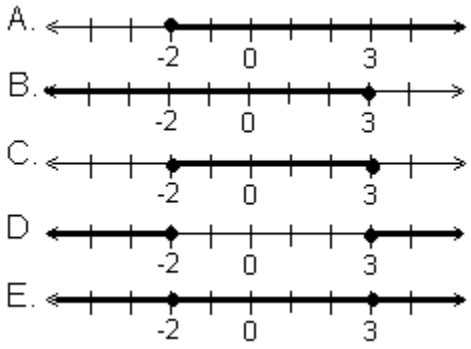
5. If 500 students attend Washington Middle School, how many are going to the mountains for vacation?

A. 25
B. 60
C. 75
D. 100
E. 125

6. If a ¼ of a teaspoon is 1 ml, then how many milliliters are in 6 teaspoons?

A. 10 ml
B. 12.5 ml
C. 15 ml
D. 20 ml
E. 24 ml

7. Which of the following is the correct graph for x≥3 or x≤ -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 ¼ of an inch represents 20 miles. If two cities are 3 ½ inches apart, how many miles are actually between the two cities?

A. 14 miles
B. 20 miles
C. 125 miles
D. 230 miles
E. 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. 2 LW
B. 2 (L+W)
C. 2L +2W
D. (L+2) (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. $1.75 \times 10^5 =$

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 kilowatt-hours 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 3 2/3 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 4 3/5 to an improper fraction.

A. 23/5
B. 7/5
C. 12/20
D. 20/12
E. 12/5

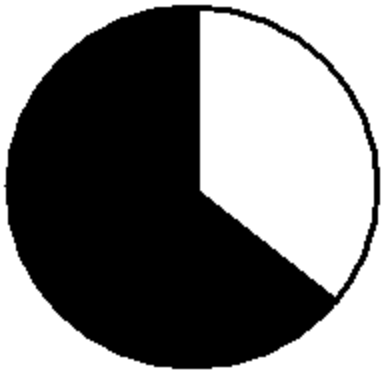
25. The fine for a driver riding in the carpool lane without any passengers is $133. A driver is issued a bench warrant for $2,294.25, which includes a 15% fee for late charges and court costs. How many tickets has the driver not paid?

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 x 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?

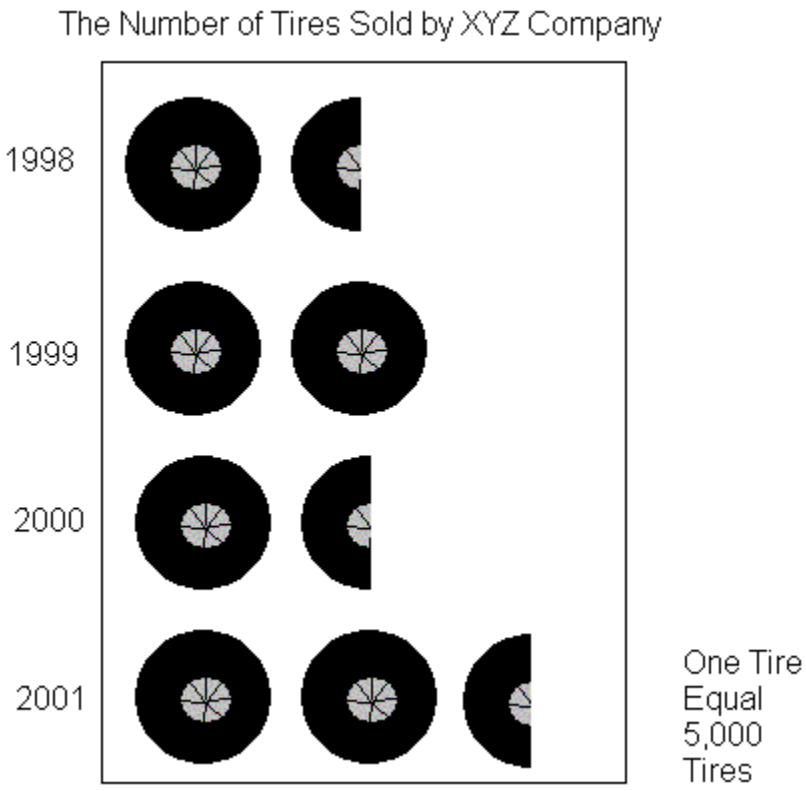
A. 5/12
B. 10/6
C. 20/30
D. 15/24
E. 15/18

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 $8x + 5 = 21$, then $3x + 4 =$

A. 2
B. 5
C. 10
D. 16
E. 17

38. In triangle ABC, AB=BC and (C's measure is 65°.) What is the measure of angle B?

A. 40°
B. 50°
C. 60°
D. 65°
E. 75°

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