

Intermediate Math Practice Questions

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 $2\frac{1}{2}$ pints of cream to make a dessert. How many pints will he need to make 3 desserts?

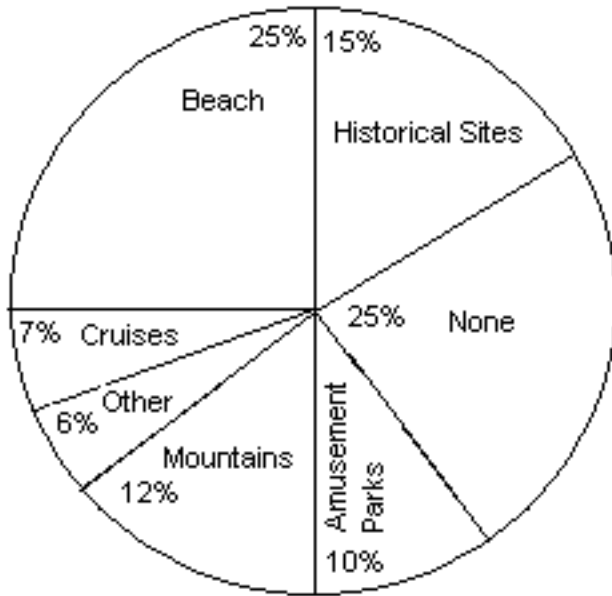
- A. $2\frac{1}{2}$
- B. 3
- C. 4
- D. 5
- E. $7\frac{1}{2}$

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?

Vacation Destinations for Students
Attending Washington Middle School



- 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 $\frac{1}{4}$ 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 $x \geq 3$ or $x \leq -2$?

- A. Line A
- B. Line B
- C. Line C

- D. Line D
- E. Line E

8. A scale on a map states that every $\frac{1}{4}$ of an inch represents 20 miles. If two cities are $3\frac{1}{2}$ 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. $2LW$
- 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. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{3}{4}$, $\frac{11}{16}$
- B. $\frac{17}{25}$, $\frac{1}{4}$, $\frac{11}{16}$, $\frac{3}{4}$
- C. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{11}{16}$, $\frac{3}{4}$
- D. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{3}{4}$, $\frac{11}{16}$
- E. $\frac{3}{4}$, $\frac{17}{25}$, $\frac{11}{16}$, $\frac{1}{4}$

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, $\frac{1}{3}$ inch equals 15 miles. The distance between two towns on a map is $3\frac{2}{3}$ 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. $\frac{1}{4}$
- B. $\frac{2}{9}$
- C. $\frac{1}{5}$
- D. $\frac{1}{8}$
- E. $\frac{2}{7}$

24. Change $4\frac{3}{5}$ to an improper fraction.

- A. $\frac{23}{5}$
- B. $\frac{7}{5}$
- C. $\frac{12}{20}$
- D. $\frac{20}{12}$
- E. $\frac{12}{5}$

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. $\frac{2}{3}$
- B. $\frac{3}{8}$
- C. $\frac{4}{5}$
- D. $\frac{3}{4}$
- E. $\frac{7}{16}$

28. Multiply 2.345×0.023

- 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 $\frac{5}{6}$?

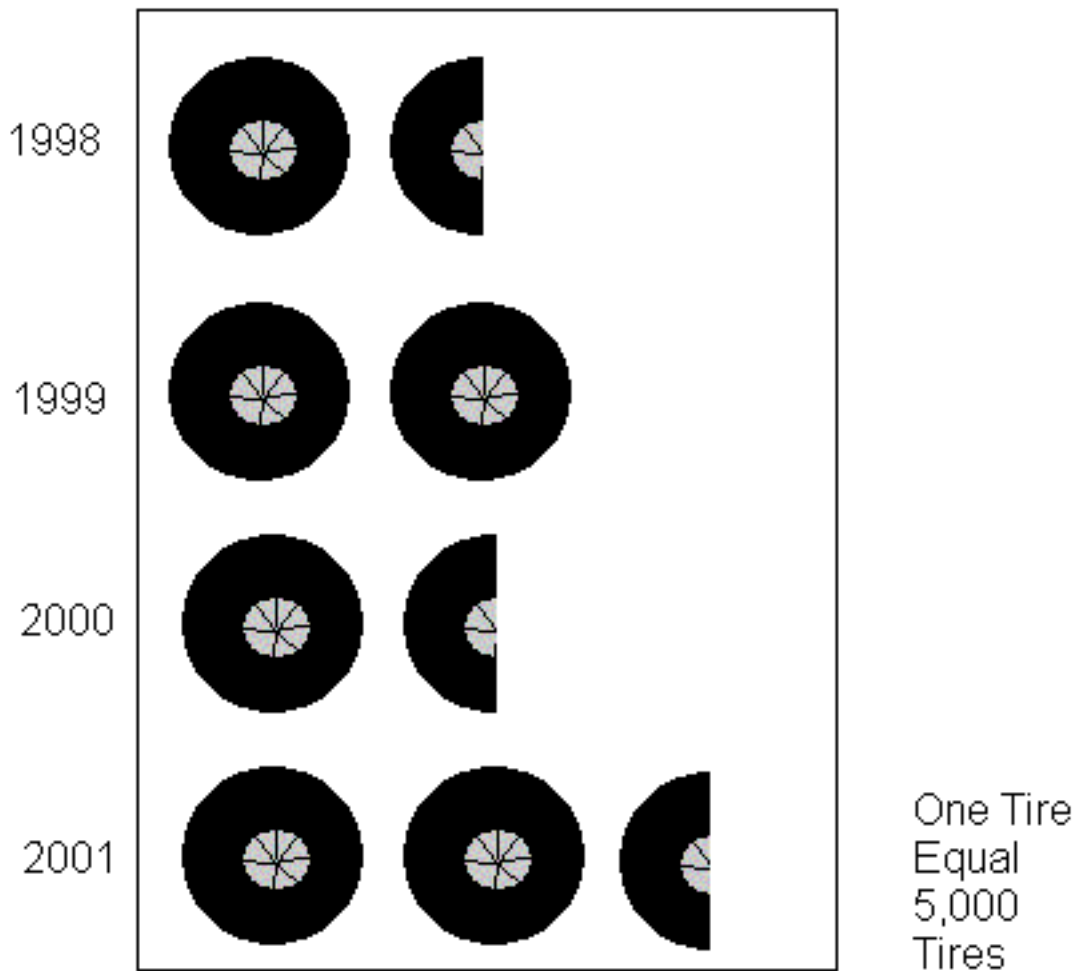
- A. $\frac{5}{12}$
- B. $\frac{10}{6}$
- C. $\frac{20}{30}$
- D. $\frac{15}{24}$
- E. $\frac{15}{18}$

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?

The Number of Tires Sold by XYZ Company



- 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 $\frac{1}{3}$ 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