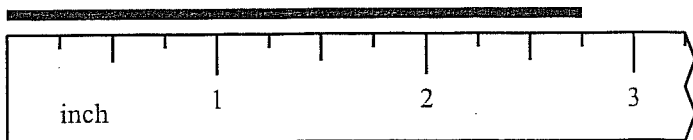


1. Find the missing terms in the pattern below. [A] 47, 96 [B] 48, 96 [C] 48, 95 [D] 47, 95
5, 7, 11, 17, 25, 35, _____, 61, 77, _____, 115
2. Subtract: $5\frac{1}{2} - 3\frac{1}{2}$ [A] 2 [B] $1\frac{1}{8}$ [C] $2\frac{5}{24}$ [D] $2\frac{1}{24}$
3. Round 0.445498 to the ten thousandths place.
[A] 0.4454 [B] 0.4455 [C] 0.44551 [D] 0.44550
4. There are 16 people on your swim team. One half of the team went to a swim meet in June. How many people went to the swim meet in June?
[A] 24 [B] 8 [C] 4 [D] 14
5. What is the described number? $3 \times 100,000 + 6 \times 10,000 + 4 \times 100 + 5 \times 1$
[A] 360,405 [B] 306,405 [C] 360,045 [D] 364,500
6. Which two fractions are equivalent to $\frac{5}{8}$?
[A] $\frac{10}{16}, \frac{25}{64}$ [B] $\frac{25}{64}, \frac{15}{24}$ [C] $\frac{10}{24}, \frac{15}{16}$ [D] $\frac{10}{16}, \frac{15}{24}$
7. What is the mode in the following data? [A] 30 [B] 24 [C] 21 [D] 72
18, 24, 5, 7, 24, 4, 24, 14
8. How long is the black strip to the nearest quarter inch?



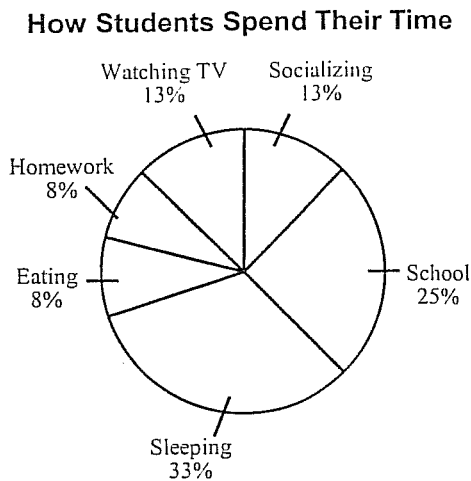
- [A] $2\frac{1}{2}$ in. [B] 11 in. [C] $2\frac{3}{4}$ in. [D] 3 in.

9. Multiply: 0.503×0.12 [A] 0.006036 [B] 60.36 [C] 6.036 [D] 0.06036

10. Write 0.67 as a fraction. [A] 67 [B] $\frac{7}{100}$ [C] $\frac{67}{100}$ [D] $\frac{67}{10}$

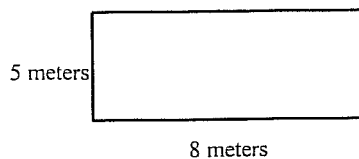
11. Kevin bought 17 candies for \$4.08. What was the price for each candy?
[A] \$0.34 [B] \$0.24 [C] \$0.22 [D] \$0.26

12. Grade 7 students were surveyed to determine how many hours a day they spent, on average, on various activities. The results are shown in the circle graph below. About how much time altogether was spent on watching TV and homework?



[A] 5 h [B] 6 h [C] 4 h [D] 21 h

13. What is the area of this rectangle?

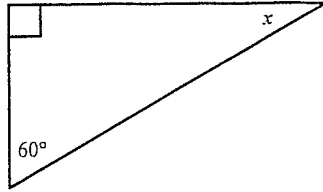


[A] 40 square meters [B] 40 meters [C] 13 square meters [D] 29 meters

14. Evaluate the power. 6^3 [A] 216 [B] 432 [C] 18 [D] 9

15. Divide: $\frac{2}{7} \div \frac{4}{7}$ [A] $\frac{1}{2}$ [B] 2 [C] $\frac{7}{8}$ [D] 7

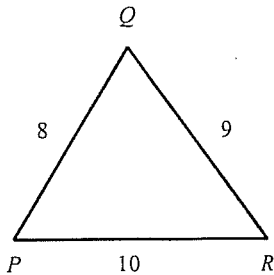
16. Find the measure of angle x . [A] 50° [B] 90° [C] 30° [D] 70°



17. Write an expression for the perimeter of a rectangle with length $2x + 2$ and width $x + 3$.

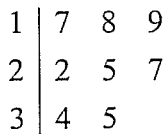
[A] $(x + 3) - (2x + 2)$ [B] $(x + 3) + (2x + 2)$ [C] $2(x + 3) + 2(2x + 2)$ [D] $(x + 3)(2x + 2)$

18. Classify triangle PQR as equilateral, isosceles, or scalene:



[A] scalene [B] isosceles [C] equilateral [D] none of these

19. What numbers are represented by the stem-and-leaf plot below?



[A] 8, 9, 10, 4, 7, 9, 7, 8

[B] 7, 8, 9, 2, 5, 7, 4, 5

[C] 71, 81, 91, 22, 52, 72, 43, 53

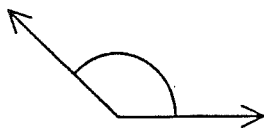
[D] 17, 18, 19, 22, 25, 27, 34, 35

20. Solve: $\frac{6}{8} = \frac{30}{x}$ [A] 15 [B] 40 [C] 67 [D] 54

21. Convert 8 yards to inches. [A] 288 in. [B] 99 in. [C] 96 in. [D] 24 in.

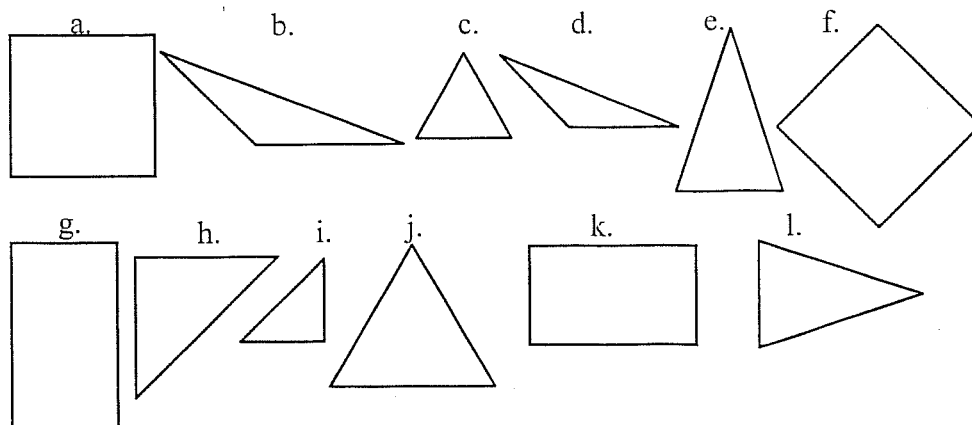
22. Evaluate: $b(c - d)$ if $b = 2$, $c = 7$, and $d = 4$ [A] 36 [B] 6 [C] 10 [D] 22

23. Classify the angle below as acute, obtuse, or right.



[A] obtuse [B] not enough information [C] right [D] acute

24. Which statement is FALSE?



[A] h and i are similar. [B] c and j are similar. [C] d and h are similar. [D] a and f are similar.

25. A rectangular fish tank has a base that is 11 inches by 5 inches. How much water will it take to fill the tank to a depth of 10 inches?

[A] 26 cu in. [B] 312 cu in. [C] 550 cu in. [D] 430 cu in.

26. Write 0.04 as a percent. [A] 0.0004% [B] 4% [C] 0.04% [D] $\frac{4}{100}$ %

27. A dress usually sells for \$88. The sale price is 70% of the usual price. What is the sale price?

[A] \$87.30

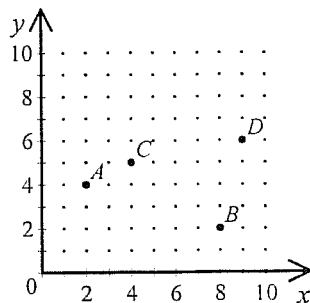
[B] \$26.40

[C] \$61.60

[D] \$81.00

28. Find the product. Simplify, if necessary. $2\frac{2}{3} \times \frac{1}{4}$ [A] $\frac{1}{4}$ [B] $\frac{3}{4}$ [C] 2 [D] $\frac{2}{3}$

29. State the coordinates of each point.



[A] $A(4, 2), B(2, 8), C(5, 4), D(6, 9)$

[B] $A(4, 5), B(2, 8), C(9, 6), D(4, 2)$

[C] $A(2, 4), B(8, 2), C(4, 5), D(9, 6)$

[D] $A(9, 6), B(4, 5), C(8, 2), D(2, 4)$

30. Ms. Edwards is redecorating her office. She has a choice of 5 colors of paint, 2 kinds of curtains, and 3 colors of carpet. How many different ways are there to redecorate?

[A] 30

[B] 15

[C] 22

[D] 10

31. Find the next three numbers of the pattern.

$$\frac{1}{24}, \frac{1}{12}, \frac{1}{8}, \frac{1}{6}$$

[A] $\frac{5}{24}, \frac{1}{4}, \frac{7}{24}$

[B] $\frac{1}{4}, \frac{1}{3}, \frac{1}{2}$

[C] $\frac{5}{12}, \frac{1}{2}, \frac{7}{12}$

[D] $\frac{1}{5}, \frac{1}{4}, \frac{1}{3}$

32. Suppose you are making a circle graph of your friends' favorite foods. You find that $\frac{1}{3}$ of them like spaghetti the best. What would be the measure of the angle in this section of your circle graph?

[A] 240°

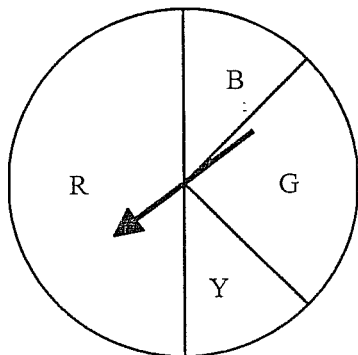
[B] 3°

[C] 60°

[D] 120°

33. Solve: $15 = m - 7$ [A] 22 [B] 20 [C] 8 [D] 105

34. If you spin the spinner, what is the probability of the pointer landing on R?



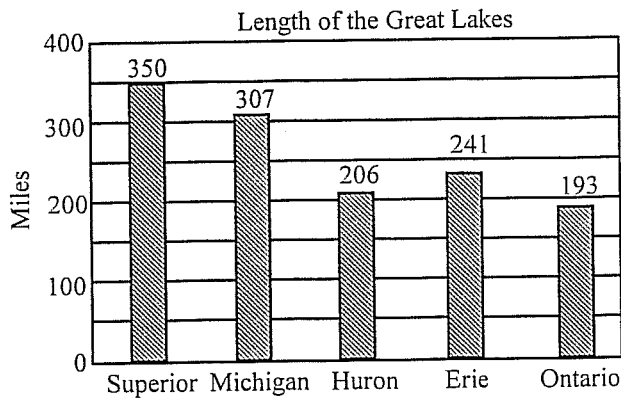
- [A] $\frac{3}{8}$ [B] 1 [C] $\frac{1}{2}$ [D] $\frac{1}{4}$
35. Simplify: $36 \div 6 \cdot 6 + 6 - 4$ [A] 38 [B] 3 [C] 8 [D] 2

36. The ratio of cars to people in Australia is 280 to 1000. Write this ratio as a fraction in simplest form.

- [A] $\frac{280}{1000}$ [B] $\frac{14}{25}$ [C] $\frac{7}{50}$ [D] $\frac{7}{25}$

37. What is the difference? $64.07 - 28.9$ [A] 45.17 [B] 35.17 [C] 61.18 [D] 35.98

38. Use the bar graph. It shows the length in miles of the Great Lakes.



What is the combined length of all the Great Lakes?

- [A] 1300 mi [B] 1104 mi [C] 1279 mi [D] 1297 mi
39. One day the temperature in Tripoli was 22°C . The temperature in Geneva was -5°C . What is the difference in these temperatures?
- [A] 27°C [B] impossible to tell [C] 4.40°C [D] 17°C
40. Write a function rule for the table.
- | | | | | |
|-----|---|---|---|---|
| n | 1 | 2 | 3 | 4 |
| y | 3 | 2 | 1 | 0 |
- [A] not enough information [B] $y = 4n$ [C] $y = 3 + n$ [D] $y = 4 - n$
41. Complete the statement. $683 \text{ mm} = ? \text{ m}$ [A] 68.3 [B] 6.83 [C] 0.683 [D] 683
42. Ryan plans to paint a solid cube that has an edge of 10 feet. What is the total area of the surface Ryan will paint?
- [A] 600 ft^2 [B] 1000 ft^2 [C] 100 ft^2 [D] 300 ft^2
43. Ralph used $3\frac{1}{2}$ cups of flour and $8\frac{1}{2}$ cups of sugar in his recipe. How many cups of dry ingredients did he use?
- [A] 2 cups [B] 5 cups [C] 8 cups [D] 12 cups

44. Which of the following numbers is less than 2.29?

[A] 2.2911

[B] 2.2901

[C] 2.2910

[D] 2.2899

45. A single fair die is tossed. Find the probability of obtaining the number 5.

[A] 1

[B] $\frac{5}{6}$

[C] $\frac{1}{6}$

[D] $\frac{1}{3}$

46. Write an equation from the following statement, and then solve the equation.
When a number is increased by 17, the result is 30.

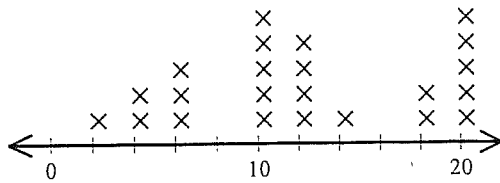
[A] $x - 17 = 30$
 $x = 47$

[B] $x + 17 = 30$
 $x = 13$

[C] $x - 30 = 17$
 $x = 47$

[D] $x + 30 = 17$
 $x = 13$

47. The line plot below represents the number of movies seen in a year by middle school students. Each x represents 10 students. How many students saw 11 or more movies?



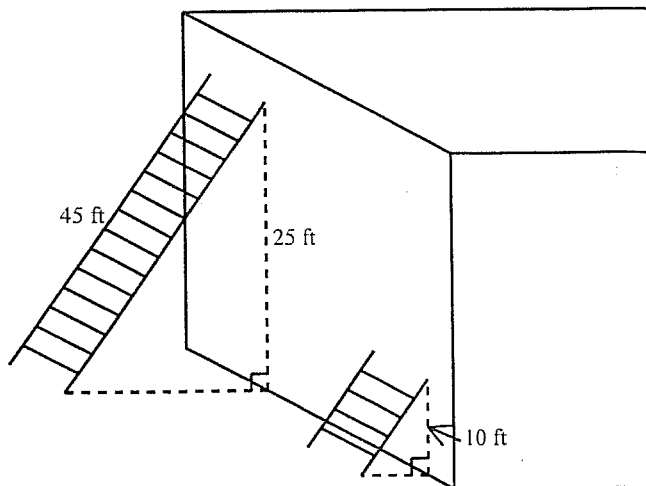
[A] 100 students

[B] 110 students

[C] 12 students

[D] 120 students

48. Two ladders are leaning against a wall at the same angle as shown. How long is the shorter ladder?



[A] 18 ft

[B] 14 ft

[C] 36 ft

[D] 8 ft

49. Evaluate the expression. $2507 - 1996$ [A] 501 [B] 511 [C] 611 [D] 411

50. Find the mean of the data.
24, 29, 28, 25, 29 [A] 28 [B] 27 [C] 29 [D] 25

Penny Sikes Fifth & Sixth Grade Mathematics Tournament
Sponsored by Southeast Bulloch High School & Burger King
April 17, 2004
Sixth Grade Division Item Analysis

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