

1. Simplify:  $16 \div 4 \cdot 4 + 8 - 2$

2. Evaluate  $\frac{km}{k+m}$  when  $k = 5$  and  $m = 13$ .

3. Which law is illustrated by the following statement?

$$(4 + 2) + 7 = (2 + 4) + 7$$

[A] commutative law of multiplication

[B] commutative law of addition

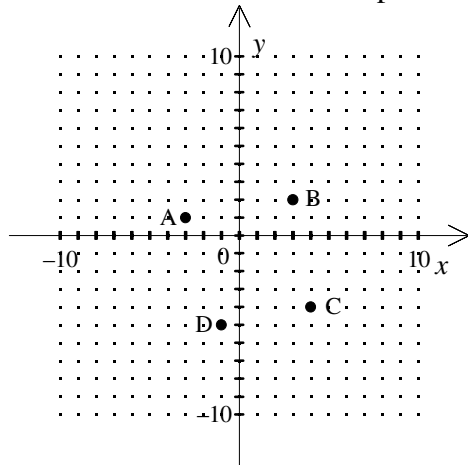
[C] associative law of addition

[D] associative law of multiplication

4. Simplify:  $6x - 5 - 4x + 7$       [A]  $10x - 12$       [B]  $2x + 2$       [C]  $10x + 2$       [D]  $2x - 12$

5. Graph the point  $C(-4, 1)$ .

6. Name the coordinates of the points A, B, C, and D.



7. Simplify:  $|-14|$

8. Add:  $7 + (-13)$

9. Subtract:  $-21 - (-7)$

10. Multiply:  $-4 \cdot (-6)$

11. Divide:  $15 \div (-5)$

12. Insert  $=$ ,  $<$ , or  $>$  to make a true statement:  $\frac{5}{11}$  \_\_\_\_\_  $\frac{25}{28}$

13. Multiply:  $\frac{5}{33} \cdot \frac{9}{45}$

14. Divide:  $\frac{14}{6} \div \frac{4}{9}$

Add:

15.  $\frac{9}{10} + \frac{4}{10} + \frac{2}{10} + \frac{4}{10}$

16.  $\frac{2}{9} + \frac{1}{4}$

17. Multiply:  $-4(x - 2)$

Solve:

18.  $29 = m - 7$

19.  $30 = 5y$

20.  $7x + 2 = 65$

21. When a number is decreased by 15, the result is  $-17$ . Find the number.

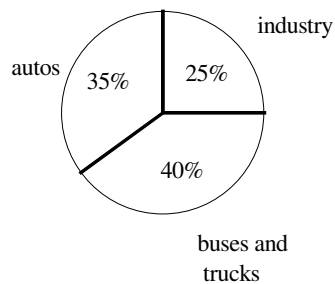
22. When a number is increased by 43, the result is  $-30$ . Find the number.

23. Solve:  $4x + 5 = x + 3$

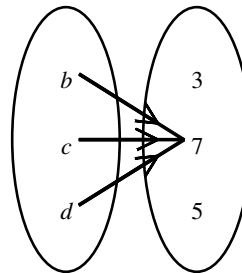
24. Graph:  $x < -4$
25. Solve:  $4x - 16 < 4$
26. Name the fraction that shows the ratio of 4 cars to 7 cars.
27. Solve:  $\frac{7}{2} = \frac{z}{10}$
28. Convert 31 feet to yards.
29. Write  $\frac{1}{4}$  as a percent.
30. Write 39.9% as a decimal.
31. Write 0.043 as a percent.
32. Write 13% as a reduced fraction.
33. What is 50% of 0?
34. 2 is what percent of 10?
35. 18 is 40% of what number?

36. The circle graph below represents the main sources of air pollution. According to the circle graph, which is the main source of air pollution?

**Source of Air Pollution**



37. Determine whether each relation is a function.



38. Graph:  $4x + y = 8$
39. Find the slope of the line containing the points  $(10, -5)$  and  $(6, -11)$ .
40. Write the slope-intercept form of the equation of the line that has slope 1 and passes through the point  $(-6, 3)$ .
41. Evaluate the variable expressions when  $a = 3$ .  
A.  $3a^2$   
B.  $(3a)^2$
42. Write as a fraction and simplify.  
 $8^{-2}$

43. Write the number in decimal form.

$$3.94 \times 10^9$$

44. Write the number in scientific notation.

$$3,900,000$$

Simplify the expression.

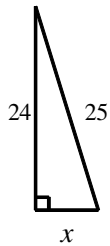
45.  $(-2y)^3$

46.  $6^1 \times 6^5$       [A]  $6^5$       [B]  $36^6$       [C]  $6^6$       [D]  $6^4$

47. Given that  $f(x) = 2x^2$ , complete the table and sketch the quadratic function.

$x$	-2	-1	0	1	2
$f(x)$					

48. Solve for  $x$ .



49. Find the distance between points  $P(-5, -2)$  and  $Q(3, -4)$ .