

A. Solve each equation.

1.  $13 = 8 - 6r$

2.  $5(6 - 4v) = v + 21$

3.  $-6 = \frac{4x}{7} + 2$

4.  $\frac{1}{8} - \frac{3}{4}x = \frac{1}{16}$

B. Define a variable, write an equation and solve the problem.

5. Fourteen less than twice some number is 154. Find the number.

6. The length of a rectangle is 9 centimeters more than half the width. Find the length if the perimeter is 60 centimeters.

C. Solve each equation or formula for the variable specified.

7.  $I = prt$ , for  $t$

8.  $de - 4f = 5g$ , for  $e$

9.  $A = \frac{1}{2}h(b_1 + b_2)$ , for  $b_1$

10.  $ax + by = c$ , for  $y$

11.  $\frac{x}{a} + b = c$ , for  $x$

D Name the property illustrated.

11. If  $1.5(7.5) = 11.25$ , then  $11.25 = 1.5(7.5)$

12. If  $7 = 1+2+4$  and  $1+2+4 = 4 + 3$ , then  $7 = 4 + 3$ .

13. If  $12 + 2x = 25$ , then  $2x = 13$ .

14. If  $abc = x+y$ , then  $ab = \frac{x+y}{c}$

15 If  $x = 5$  and  $x + y = 13$ , then  $(5) + y = 13$ .

A. Solve each equation.

1.  $12 = 7 - 4s$

2.  $t + 24 = 6(5 - 4t)$

3.  $-8 = \frac{4y}{9} + 2$

4.  $\frac{1}{3} - \frac{5}{6}p = \frac{3}{18}$

B. Define a variable, write an equation and solve the problem.

5. Fifteen less than twice some number is 115. Find the number.

6. The width of a rectangle is 8 centimeters more than half the length. Find the width if the perimeter is 82 centimeters.

C. Solve each equation or formula for the variable specified.

7.  $I = prt$ , for  $r$

8.  $de - 4f = 5g$ , for  $f$

9.  $A = \frac{1}{2}h(b_1 + b_2)$ , for  $b_2$

10.  $ax + by = c$ , for  $x$

11.  $\frac{y}{a} + b = c$ , for  $y$

D. Name the property illustrated.

11. If  $3(12.5) = 37.5$ , then  $37.5 = 3(12.5)$

12. If  $8 = 1+3+4$  and  $1+3+4 = 5 + 3$ , then  $8 = 5 + 3$ .

13. If  $25 - 2x = 75$ , then  $-2x = 50$ .

14. If  $abc = x+y$ , then  $ac = \frac{x+y}{b}$

15. If  $x = 12$  and  $x + y = 17$ , then  $(12) + y = 17$ .