

Multi-Step Equations

Solve for the Variable.

1. $x + 3 = -10$

$x = -13$

2. $5 + y = 15$

$y = 10$

3. $3x + 7 = 10$

$x = 1$

4. $18 = 3x - 9$

$x = 9$

Solve for y.

5. $3x + y = 6$

$y = -3x + 6$

7. $2x + y = -4$

$y = -2x - 4$

9. $-4x + 2y = 16$

$y = 2x + 8$

6. $4x - y = 5$

$y = 4x - 5$

8. $3x - 4y = 12$

$y = \frac{3x}{4} - 3$

10. $x - 3y = -9$

$y = \frac{1}{3}x + 3$

Use the equations to solve for the variable stated.

11. $d = rt$

a. for r

$r = \frac{d}{t}$

b. for t

$t = \frac{d}{r}$

12. $y = mx + b$

a. for m

$\frac{y-b}{x} = m$

b. for b

$b = y - mx$

c. for x

$\frac{y-b}{m} = x$

13. $f = ma$

a. for m

$m = \frac{f}{a}$

b. for a

$a = \frac{f}{m}$

14. $e = f + gh$

a. for g

$g = \frac{e-f}{h}$

15. $x = \frac{3}{4}(y - 8)$

a. for y

$\frac{x}{3/4} + 8 = y$

16. $v = \frac{d}{t}$

a. for t

$t = \frac{d}{v}$

b. for d

$d = vt$

c. for v

$v = \frac{d}{t}$

$$17. a = \frac{v_2 - v_1}{t}$$

a. for t $t = \frac{V_2 - V_1}{a}$

$$18. KE = \frac{1}{2}mv^2$$

a. for m $m = \frac{KE}{\frac{1}{2}v^2}$

$$19. jk + 6k = 15$$

a. for k $k = \frac{15}{j+6}$

$$20. m(a + b) = w$$

a. for a $a = \frac{w}{m} - b$

$$21. n - (4w + q) = p$$

a. for w $w = \frac{p - n + q}{-4}$

$$22. p(7m - q) + z = r$$

a. for m $m = \frac{\frac{r-z}{p} + q}{7}$