

Multi-Step Equations

Solve each equation.

1) $-20 = -4x - 6x$

2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

16) $3n - 5 = -8(6 + 5n)$

17) $-(1 + 7x) - 6(-7 - x) = 36$

18) $-3(4x + 3) + 4(6x + 1) = 43$

19) $24a - 22 = -4(1 - 6a)$

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

Multi-Step Equations

Solve each equation.

1) $-20 = -4x - 6x$

$$-20 = -10x$$

$$2 = x$$

3) $8x - 2 = -9 + 7x$

$$x = -7$$

5) $4m - 4 = 4m$

$$0 = -4$$

NO SOLUTION

7) $5p - 14 = 8p + 4$

$$-3p = 18$$

$$p = -6$$

9) $-8 = -(x+4)$

$$-8 = -x - 4$$

$$-4 = -x$$

$$4 = x$$

11) $14 = -(p-8)$

$$14 = -p + 8$$

$$6 = -p \quad p = -6$$

13) $-18 - 6k = 6(1 + 3k)$

$$-18 - 6k = 6 + 18k$$

$$-24 = 24k$$

$$-1 = k$$

15) $2(4x - 3) - 8 = 4 + 2x$

$$8x - 6 - 8 = 4 + 2x$$

$$8x - 14 = 4 + 2x$$

$$6x = 18$$

$$x = 3$$

17) $-(1 + 7x) - 6(-7 - x) = 36$

$$-1 - 7x + 42 + 6x = 36$$

$$41 - x = 36$$

$$-x = -5$$

$$x = 5$$

19) $24a - 22 = -4(1 - 6a)$

$$24a - 22 = -4 + 24a$$

$$24a - 22 = 24a - 4$$

$$-22 = -4$$

NO SOLUTION

2) $6 = 1 - 2n + 5$

$$6 = 6 - 2n$$

$$0 = -2n$$

$$0 = n$$

4) $a + 5 = -5a + 5$

$$6a = 0$$

$$a = 0$$

6) $p - 1 = 5p + 3p - 8$

$$p - 1 = 8p - 8$$

$$7 = 7p$$

$$1 = p$$

8) $p - 4 = -9 + p$

$$0 = -5$$

NO SOLUTION

10) $12 = -4(-6x - 3)$

$$12 = 24x + 12$$

$$0 = 24x$$

$$0 = x$$

12) $-(7 - 4x) = 9$

$$-7 + 4x = 9$$

$$28x = 16$$

$$x = .57$$

14) $5n + 34 = -2(1 - 7n)$

$$5n + 34 = -2 + 14n$$

$$36 = 9n$$

$$4 = n$$

16) $3n - 5 = -8(6 + 5n)$

$$3n - 5 = -48 - 40n$$

$$43 = 37n$$

$$1.16 = n$$

18) $-3(4x + 3) + 4(6x + 1) = 43$

$$-12x - 9 + 24x + 4 = 43$$

$$12x - 5 = 43$$

$$12x = 48$$

$$x = 4$$

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

$$-5 + 25x - 40x - 10 = -4x - 8x$$

$$-15 - 15x = -12x$$

$$-15 = 3x$$

$$-5 = x$$