

4.2 – Solve Multi-Step Equations Worksheet #1

MPM1D

Jensen

1. Solve

a) $3 + 4m + 5m = 21$

b) $16y - 8 - 9y = 27$

c) $46 = 2 - 8w - 3w$

d) $3d + 4 - 9d + 12 = 0$

2. Solve

a) $5x + 9 = 3x + 7$

b) $-2u - 8 = 5u - 1$

c) $4y - 13 = -6y + 7$

d) $7 - 5m = -2 - 2m$

3. Solve

a) $0 = 14 - x + 6x - 9$

b) $11 - n + 3 = 3n + 3n$

c) $4t - 5 = 2t + 5$

d) $6k - 3 - 2k = k - 3$

4. Find the root of each equation

a) $2(x - 2) = 4x - 2$

b) $4c + 3 = 3(c - 4)$

c) $6p + 4(8 - p) = 22$

d) $k = 2(11 - k) + 14$

5. Find the root of each equation

a) $2(x - 3) + 3(x - 2) = 18$

b) $4(y - 1) - (y - 5) = 10$

$$c) 2(c + 2) = 5(c + 1) - 7$$

$$d) 3(t - 4) = -2(t + 3) + 14$$

9. Solve each equation. Express fraction answers in lowest terms.

$$a) 3x - 8 = 7x + 10$$

$$b) 3 + 10i = 4i - 18$$

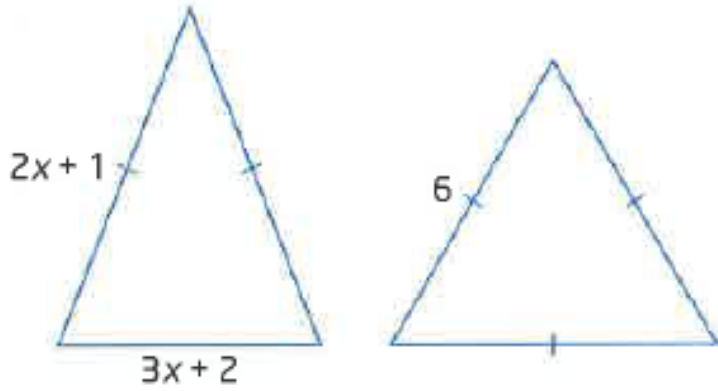
$$c) -4(u + 6) = 2(3u - 4)$$

$$d) 4(k - 3) = 2 - (2k - 6)$$

$$e) 3(p + 7) - (4p - 1) = -5(2p - 3) + 1$$

$$f) 8 - (3w - 2) = -5(w - 3) - (4w - 3)$$

13. An isosceles triangle and an equilateral triangle have the same perimeter. Find the side lengths of each triangle.



Get Ready for Tomorrow:

17. Solve each equation

a) $\frac{1}{2}(x + 6) = 4(x - 2)$

b) $\frac{1}{3}k + \frac{1}{2} = \frac{1}{4}k$

Answers:

4.2 Solve Multi-Step Equations, pages 196–203

1. a) $m = 2$ b) $y = 5$ c) $w = -4$ d) $d = \frac{8}{3}$

2. a) $x = -1$ b) $u = -1$ c) $y = 2$ d) $m = 8$

3. a) $x = -1$ b) $n = 2$ c) $t = 5$ d) $k = 0$

4. a) $x = -1$ b) $c = -15$ c) $p = -5$ d) $k = 12$

5. a) $x = 6$ b) $y = 3$ c) $c = 2$ d) $t = 4$

9. a) $x = -\frac{9}{2}$ b) $i = -\frac{7}{2}$ c) $u = \frac{8}{5}$

d) $k = \frac{10}{3}$ e) $p = -\frac{2}{3}$ f) $x = \frac{4}{3}$

13. isosceles triangle: 5, 5, 8; equilateral triangle: 6, 6, 6

17. a) $x = \frac{22}{7}$ b) $k = -6$