

Solving Simple Equations

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11:46 AM

PRE-CALCULUS 11 MATHEMATICS 10 REVIEW SOLVING SIMPLE EQUATIONS

1) Solve and check the following equations.

a) $2x + 4 = -14$

$$\frac{2x}{2} = \frac{-18}{2}$$

$$x = -9$$

check.

$$2x + 4 = -14$$

$$2(-9) + 4 = -14$$

$$-14 = -14 \checkmark$$

b) $6x + 9 = 2x + 5$

$$4x + 9 = 5$$

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

$$x = -1$$

check.

$$6x + 9 = 2x + 5$$

$$6(-1) + 9 = 2(-1) + 5$$

$$3 = 3 \checkmark$$

c) $4m + 2 + 2m = 6 - 4m - 10$

$$6m + 2 = -4m - 4$$

$$10m + 2 = -4$$

$$\frac{10m}{10} = \frac{-6}{10}$$

$$m = -\frac{3}{5}$$

check

$$4m + 2 + 2m = 6 - 4m - 10$$

$$4\left(-\frac{3}{5}\right) + 2 + 2\left(-\frac{3}{5}\right) = 6 - 4\left(-\frac{3}{5}\right) - 10$$

$$-1\frac{3}{5} = -1\frac{3}{5} \checkmark$$

$$\star d) 4a + 12 = 8a + 3 - 4a$$

$$\cancel{4a} + 12 = \cancel{4a} + 3$$

$$12 = 3$$

No solution

$$e) -(4 + 3y) + 5(y + 1) = 8 - 2(y + 4)$$

$$-4 - 3y + 5y + 5 = 8 - 2y - 8$$

$$2y + 1 = -2y$$

$$4y = -1$$

$$\frac{4}{4}y = \frac{-1}{4}$$

$$y = -\frac{1}{4}$$

check

$$-(4 + 3y) + 5(y + 1) = 8 - 2(y + 4)$$

$$-(4 + 3(-\frac{1}{4})) + 5(-\frac{1}{4} + 1) = 8 - 2(-\frac{1}{4} + 4)$$

$$\frac{1}{2} = \frac{1}{2} \checkmark$$

Assignment:

Multi-Step Equations Assignment #1 – 20

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

{2}

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

{0}

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

{-7}

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

{0}

5) $4m - 4 = 4m$

No solution.

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

{1}

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

{-6}

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

No solution.

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

{4}

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

{0}

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

{-6}

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

{4}

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

{-1}

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

{4}

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

{3}

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

{-1}

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

{5}

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

{4}

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

No solution.

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

{-5}