Curriculum Outcomes:

PR1: . Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution.

PR3. Model and solve problems using linear equations of the form:

ax = *b;* = b , a ≠ 0; *ax* + *b* = *c*; +*b* = *c,* a ≠ 0; = *b*, *x* ≠ 0 ax ax xa

ax+ *b* = *cx* + *d; a(bx* + *c)* = *d(ex* + *f); a(x* + *b)* = *c; ax* = b+*cx* **concretely, pictorially and symbolically, where *a, b, c, d, e, and f* are rational numbers**

Student Friendly:

"Rearranging an equation with variables on both side of the equal sign"

Use inverse operations to solve the following

(MUST SHOW WORK)

1) $x - 5.7 = -10.8$ +5.7 +5.7

$x = -5.1$

LH

$x - 5.7$

$-5.1 - 5.7$

-10.8

RH

-10.8

2) $28.7 - 4t = 6.3$ -28.7

$$\frac{-4t}{-4} = \frac{-22.4}{-4}$$

$$t = 5.6$$

LH

$28.7 - 4t$

$28.7 - 4(5.6)$

$28.7 - 22.4$

6.3

RH

6.3

6, 12, 18

3) $\frac{5x}{6}^{(12)} - \frac{3}{4}^{(12)} = \frac{-11}{3}^{(12)}$

$\frac{60x}{6} - \frac{36}{4} = \frac{-132}{3}$

$10x - 9^{+9} = -44^{+9}$

$\frac{10x}{10} = \frac{-35}{10}$

$x = \frac{-35}{10} = -\frac{7}{2}$

Verify

$\frac{5x}{6} - \frac{3}{4}$ $\qquad -\frac{11}{3}$

$\frac{5\left(-\frac{7}{2}\right)}{6} - \frac{3}{4}$

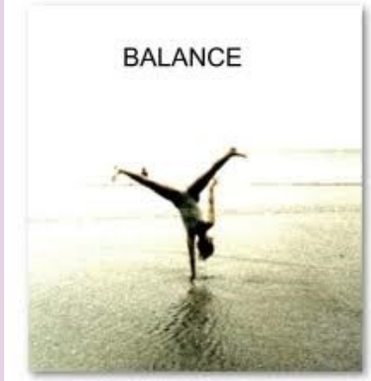
$\left[-\frac{35}{2} - 6\right] - \frac{3}{4}$

$\left[-\frac{35}{2} \times \frac{1}{6}\right] - \frac{3}{4}$

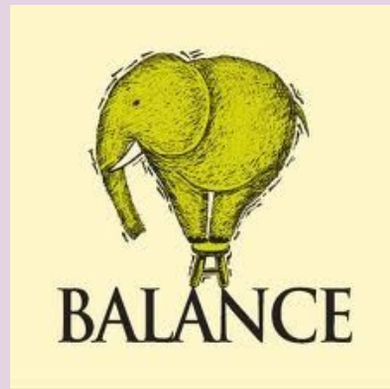
$-\frac{35}{12} - \frac{9}{12}$

$-\frac{44}{12}$

$= -\frac{11}{3}$

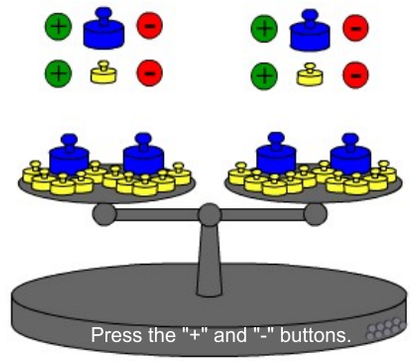


Section 6.2



Solving Equations...

Your mission is to keep everything in balance!!



What ever you do to one side...
you must do to the other!!

Solve for x...

Step 1: letters first
Step 2: Numbers 2nd

$$6x + 2 = 10 + 4x$$

$-4x$ $-4x$

$$2x + 2^{-2} = 10^{-2}$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

Ver:

LH

$6x + 2$

$6(4) + 2$

$24 + 2$

26

RH

$10 + 4x$

$10 + 4(4)$

$10 + 16$

1

$$-3c + 7 = 2c - 8$$

$+3c$ $+3c$

$$7 = 5c - 8$$

$+8$ $+8$

$$\frac{15}{5} = \frac{5c}{5}$$

$$3 = c$$

Ver

$-3(3) + 7$

$-9 + 7$

-2

$2(3) - 8$

$6 - 8$

-2

$$\frac{2a}{3} = \frac{4a}{5} + 7 \quad (15)$$

$$\frac{30a}{3} = \frac{60a}{5} + 105$$

$$10a = 12a + 105 \quad (10a)$$

$$0 = 2a + 105 \quad (-105)$$

$$\frac{-105}{2} = \frac{2a}{2}$$

$$a = \frac{-105}{2}$$

Algebra Practice Problems Date: _____

Worksheet generated at **www.math.com**

1.) $-3 + x = -7$

2.) $-10 + x = -10$

3.) $7x + 4 = -66$

4.) $-3x + 1 = -26$

5.) $4x - 8 = 2x - 4$

6.) $4 + 4x = -7x + 81$

7.) $6 + 5x = 7x + 0$

8.) $x + 2 = -18 - 4x$

9.) $-2 - 5x = 6x + 31$

10.) $5x - 1 = -2x + 41$

11.) $-6x - 8 = -3 - 5x$

12.) $3x + 3 = 11 - 5x$

13.) $-6x + 5 = x - 30$

14.) $-7x - 9 = -14 - 2x$

http://www.math.com/cgi-bin/mathf_sp.pl 2/15/2016

15.) $4x + 10 = -4x + 74$

16.) $-9 + 4x = 2x + 1$

17.) $7(10 + 2x) = -28$

18.) $-6(-10 - 2x) = 84$

1.) $\frac{x}{5} = 5$

2.) $\frac{x}{4} = -2$

3.) $-4 + 3x = -1$

4.) $-8 - 4x = -36$

5.) $-9 + 6x + 5x = 57$

6.) $3x + 7 + x = 7$

1 $-7x + 6x = -10$

8.) $-4x - 1 + 2x = -9$

9.) $-5x - 9 = x - 57$

10.) $6x + 4 = 2x - 16$

11.) $7x + 9 = 17 + 6x$

12.) $7x + 10 = 4x - 17$

13.) $-1 + 6x = 3x + 2$

14.) $-10 + 2x = 4x - 10$

17.) $-4 + 5x = x - 48$

18.) $10 + 3x = -4x + 80$

19.) $3x - 9 = 5x - 11$

20.) $7x + 2 = 2x - 33$