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"

IMPORTANT NOTICE

Starting this semester homework checks will count towards academic incentive for my math 9 classes. Remember homework is considered completed as long as it is attempted, it does not have to be done right. You must complete all homework checks in order to get your incentive.

IMPORTANT NOTICE

Solve for x using inverse operations

a) $\frac{5c}{2} = 22.5$

b) $\frac{x}{4} + 3 = \frac{5}{6}$

c) $5x + 4 = 29$

d) $3(2x-1) = -5$

e) $5 - 3x = 7$

f) $2 - \frac{x}{4} = 3$

Solve for x using inverse operations

a) $\frac{5c}{2} = 22.5$

$\frac{5c}{2} \overset{(2)}{=} 22.5 \overset{(2)}{}$

$5c = 45$

$\frac{5c}{5} = \frac{45}{5}$

$c = 9$

CW

$\frac{5(9)}{2}$

$\frac{45}{2}$

22.5

22.5

b) $\frac{x}{4} + 3 = \frac{5}{6}$

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

$\frac{12x}{4} + 36 = \frac{60}{6}$

$3x + 36^{-36} = 10^{-36}$

$\frac{3x}{3} = \frac{-26}{3}$

$x = \frac{-26}{3}$

c) $5x + 4 = 29$

$5x + 4 \overset{-4}{=} 29 \overset{-4}{}$

$\frac{5x}{5} = \frac{25}{5}$

$x = 5$

d) $3(2x-1)= -5$

$6x - 3 \overset{+3}{=} -5 \overset{+3}{}$

$\frac{6x}{6} = \frac{-2}{6}$

$x = \frac{-2}{6} = \frac{-1}{3}$

e) $5 - 3x = 7$

e) $5 - 3x = 7$ -5 -5

$$\frac{-3x}{-3} = \frac{2}{-3}$$

$$x = -\frac{2}{3}$$

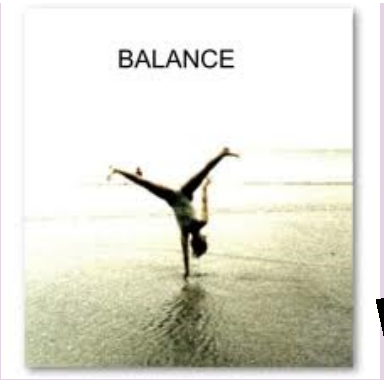
$$f)\ 2 - \frac{x}{4} = 3$$

$$f)\ 2^{(4)} - \frac{x}{4}^{(4)} = 3^{(4)}$$

$$8 - x = 12^{-8}$$

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

$$x = -4$$



Section 6.2

$6x + 3 = 15$

$5x + 2y - 6x + 3y - 2x + 4y$

$5x - 6x - 2x + 2y + 3y + 4y$

$-3x + 9y$

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...

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

$-4x$ $-4x$

$$2x + 2 = 10$$

-2 -2

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

$$x = 4$$

Verify

LH

$6(4)+2$

$24+2$

26

RH

$10+4(4)$

$10+16$

26

$26 \longleftrightarrow 26$

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

$-3c + 7 = 2c - 8$ (+3c, +3c)

$7 = 5c - 8$ (+8, +8)

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

$3 = c$

$-3c + 7 = 2c - 8$ (−2c, −2c)

$-5c + 7 = -8$ (−7)

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

$c = 3$

$$5a - 8 = 16 - 3a$$

$+3a$ $+3a$

$$8a - 8 = 16$$

$+8$ $+8$

$$\frac{8a}{8} = \frac{24}{8}$$

$$a = 3$$

LH

$5(3) - 8$

$15 - 8$

7

RH

$16 - 3(3)$

$16 - 9$

7

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

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

$$10a \overset{-10a}{=} 12a \overset{-10a}{} + 105$$

$$0 \overset{-105}{=} 2a + 105 \overset{-105}{}$$

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

$$a = -52.5$$

$$10a = 12a + 105$$

$-12a \quad -12a$

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

$$a = -52.5$$

$\frac{122^{(r)}}{r} = 3^{(r)}$, Public service announcement.

$\frac{122}{3} = \frac{3r}{3}$

$r = \frac{122}{3}$

$$\frac{3}{r}(r) + 4(r) = 12(r)$$

$$3 + 4r = 12r \quad -4r \quad -4r$$

$$\frac{3}{8} = \frac{8r}{8}$$

$$r = \frac{3}{8}$$

Class/Homework

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Show all work. Don't worry about identifying which strategy you used.

#6 Do not use algebra tiles
8
#10(acf)