Curriculum Outcome

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

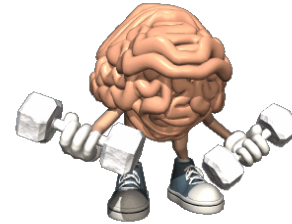*ax+ b = cx + d; a(bx + c) = d(ex + f); a(x + b) = c; ax = b+cx*

concretely, pictorially and symbolically, where *a, b, c, d, e, and f* are   rational numbers

EXTENSION to unit: Solving equations with fraction in them

Student Friendly: "Rearranging an equation to get all the variables by themselves". Taking care of a fraction.

Take out a piece of paper
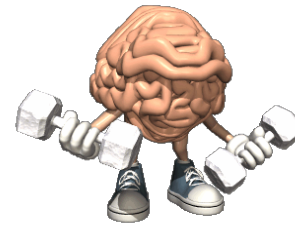
-Put your name on the top

1) $10 - 2x = 85 + 3x$

2) $\dfrac{-1x}{5} + 5 = \dfrac{9}{2}$

3) $\dfrac{1}{3}(9x + 3) = \dfrac{3}{2}(20x - 8)$

4) $6 - 5x + 3 - 2x = 4x - 5x - 7 + 8$

Warm Up

1) $10 - 2x = 85 + 3x$

$x = -15$

2) $\dfrac{-1x}{5} + 5 = \dfrac{9}{2}$

$x = \dfrac{5}{2}$

3) $\dfrac{1}{3}(9x + 3) = \dfrac{3}{2}(20x - 8)$

$x = \dfrac{13}{27}$

4) $6 - 5x + 3 - 2x = 4x - 5x - 7 + 8$

$x = \dfrac{4}{3}$

13) $\dfrac{-21}{5} - \dfrac{16b}{5} = \dfrac{1b}{2} - \dfrac{1}{2}$

$\overset{(10)}{\dfrac{-21}{5}} \overset{(10)}{-\dfrac{16b}{5}} = \overset{(10)}{\dfrac{1b}{2}} \overset{(10)}{- \dfrac{1}{2}}$

$\dfrac{-210}{5} - \dfrac{160b}{5} = \dfrac{10b}{2} - \dfrac{10}{2}$

$-42 \boxed{-32b} = \boxed{5b} - 5$

$-42 \overset{+32b}{- 32b} = \overset{+32b}{5b} - 5$

$-42 = \boxed{37b} - 5$

$-42^{+5} = 37b - 5^{+5}$

$\dfrac{-37}{37} = \dfrac{37b}{37}$

$\boxed{-1 = b}$

$-42^{+42} = 37b - 5^{+42}$

$0 \overset{-37}{=} 37b + 37$

$\dfrac{-37}{37} = \dfrac{37b}{37}$

$\boxed{-1 = b}$

15) $\dfrac{3v}{5} - \dfrac{10}{3} = \dfrac{1}{15} - \dfrac{6v}{5} + \dfrac{7v}{2}$

$\overset{(30)}{\dfrac{3v}{5}} - \overset{(30)}{\dfrac{10}{3}} = \overset{(30)}{\dfrac{1}{15}} - \overset{(30)}{\dfrac{6v}{5}} + \overset{(30)}{\dfrac{7v}{2}}$

$\dfrac{90v}{5} - \dfrac{300}{3} = \dfrac{30}{15} - \dfrac{180v}{5} + \dfrac{210}{2}v$

$18v - 100 = 2 \underbrace{- 36v + 105v}$

$\boxed{18v} - 100 = 2 \boxed{+ 69v}$

$18v^{-18v} - 100 = 2 + 69v^{-18v}$

$-100 = 2 + 51v$

$-100^{-2} = 2^{-2} + 51v$

$\dfrac{-102}{51} = \dfrac{51v}{51}$

$\boxed{-2 = v}$

17) $2m - \dfrac{6m}{5} = \dfrac{-5m}{3}$

$2m^{(15)} - \dfrac{6m^{(15)}}{5} = \dfrac{-5m}{3}^{(15)}$

$30m - \dfrac{90m}{5} = \dfrac{-75m}{3}$

$30m - 18m = -25m$

$12m = \boxed{-25m}$

$12m = -25m \quad \overset{+25m}{}$
$\quad\;\; +25m$

$\dfrac{37m}{37} = \dfrac{0}{37}$

$\boxed{m = 0}$

Class/Homework

Page 281 - 283

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

Today
Feb 11

#6
8
#10(acf)
#11(a,c,e,f)
#12

Do not use algebra tiles

When you see fractions you must work with fractions

Tomorrow   Feb 12

#13
#15
#16 (ai)
#17
19
#21