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"

Solve for the "unknown" variable
(Use inverse operation and SHOW ALL WORK)

1) $\frac{-6}{r} = 24$ (r)

$\frac{-6}{24} = \frac{24r}{24}$

$r = -\frac{6}{24}$

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

2) $-3(h+3) = 2(h-1)$

$-3h - 9 = 2h - 2$ (+3h, +3h)

$-9 = 5h - 2$ (+2, +2)

$\frac{-7}{5} = \frac{5h}{5}$

$h = -\frac{7}{5}$

$= -1.4$

3) $\frac{3x}{4}(12) - \frac{1}{6}(12) = \frac{5x}{6}(12) - \frac{1}{4}(12)$

$9x - 2 = 10x - 3$ (−9x, −9x)

$-2 = x - 3$ (+3, +3)

$1 = x$

$x = 1$

Solve

$4(y+8) = 7(y+2)$

$4y + 32 = 7y + 14$ (−4y, −4y)

$32 = 3y + 14$ (−14, −14)

$\frac{18}{3} = \frac{3y}{3}$

$6 = y$

$y = 6$

$$\frac{2}{3}(6x + 9) = \frac{1}{2}(10x - 2)$$

$$\frac{12x}{3} + \frac{18}{3} = \frac{10x}{2} - \frac{2}{2}$$

$$4x + 6 = 5x - 1 \quad (-4x \text{ to both sides})$$

$$6 = x - 1 \quad (+1 \text{ to both sides})$$

$$7 = x$$

$$\boxed{x = 7}$$

$\frac{2}{3}(5x+2) = \frac{1}{2}(7x-3)$

x= 17

$\frac{10x}{3}^{(6)} + \frac{4}{3}^{(6)} = \frac{7x}{2}^{(6)} - \frac{3}{2}^{(6)}$

$20x + 8 = 21x - 9$ (−20x, −20x)

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

$17 = x$

$x = 17$

$\frac{2}{3}(5x + 2) = \frac{1}{2}(7x - 3)$

x= 17

$\frac{10x}{3}^{(6)} + \frac{4}{3}^{(6)} = \frac{7x}{2}^{(6)} - \frac{3}{2}^{(6)}$

$20x + 8 = 21x - 9$

$8 = x - 9$

$x = 17$

$$\frac{2}{3}(x-7) = \frac{11}{2}(x+4)$$

$$\frac{2}{3}x - \frac{14}{3} = \frac{11}{2}x + \frac{44}{2} \quad (6)$$

$$4x - 28 = 33x + 132 \quad -4x$$

$$-28 = 29x + 132 \quad -132$$

$$\frac{-160}{29} = \frac{29x}{29}$$

$$x = \frac{-160}{29}$$

Class/Homework

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#11(ace)
#16 (aii)
#17(bd)
#18
19(cd)
#21(bc)

#11(b,d)
#16 (ai)
#17(ac)
19(a,b)
#21(a,b)

When you see fractions you mu
work with fractio