

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:

$$ax = b; = b, a \neq 0; ax + b = c; +b = c, a \neq 0; = b, x \neq 0$$

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

Warm Up

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

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

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

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

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

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

$$\boxed{-3h} - 9 = \boxed{2h} - 2$$

$$-9 = \boxed{5h} - 2$$

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

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

$$= -1.4$$

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

$$\boxed{9x} - 2 = \boxed{10x} - 3$$

$$-2^{+3} = \boxed{x} = \cancel{3^{+3}}$$

$$1 = x$$

$$\boxed{x = 1}$$

Solve

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



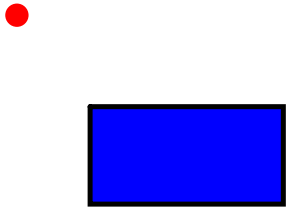
$$\cancel{4y} + 32 = 7y + 14$$

$$32 = 3y + \cancel{14}$$

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

$$6 = y$$

$$\boxed{y=6}$$

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


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

$$4x + 6 = 5x - 1$$

$$6 + 1 = x - 1 + 1$$

$$7 = x$$

$$\boxed{x = 7}$$

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



$$x = 17$$

$$\frac{10x}{3} + \frac{4}{3} = \frac{7x}{2} - \frac{3}{2}$$

$$\cancel{20x} + 8 = \cancel{20x} - 9$$

$$8^{+9} = x - 9^{+9}$$

$$17 = x$$

$$\boxed{x = 17}$$

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



$$\frac{10x^{(6)}}{3} + \frac{4^{(6)}}{3} = \frac{7x^{(6)}}{2} - \frac{3^{(6)}}{2} \quad x = 17$$

$$20x + 8 = 21x - 9$$

$$8 + 9 = x - 9 + 9$$

$$x = 17$$



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

$$\frac{2}{3}x - \frac{14}{3} = \frac{11}{2}x + \frac{44}{2}$$

$$\cancel{4x} - 28 = \cancel{33x} + 132$$

$$-28 = 29x + \cancel{132}$$

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

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

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 must
work with fractions