

Math 9

Solving Two Step Equations Part 2

Review: Solve. Show your work!

$$1) 22 = 5y - 3$$

$+3 \quad +3$

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

$$\boxed{5 = y}$$

$$3) 11 = \frac{x}{4} + 6$$

$-6 \quad -6$

$$(4) 5 = \frac{x(4)}{4}$$

$$\boxed{20 = x}$$

$$5) 2 + 2.5x = 0.45$$

$-2 \quad -2$

$$\frac{2.5x}{2.5} = \frac{-1.55}{2.5}$$

$$\boxed{x = -0.62}$$

$$2) -3x + 2 = -19$$

$-2 \quad -2$

$$\frac{-3x}{-3} = \frac{-21}{-3}$$

$$\boxed{x = 7}$$

$$4) -\frac{x}{5} + 6 = -7$$

$-6 \quad -6$

$$(-5) \frac{x}{5} = -13(-5)$$

$$\boxed{x = 65}$$

$$\frac{5x}{5}$$

$$6) -3.3x + 1.5 = -8.4$$

$-1.5 \quad -1.5$

$$\frac{-3.3x}{-3.3} = \frac{-9.9}{-3.3}$$

$$\boxed{x = 3}$$

Solving Equations with Fractions

Ex. Solve.

$$a) (4x) + \frac{15(2)}{5} = -\frac{2(15)}{3}$$

$$60x + \frac{30}{5} = \frac{-30}{3}$$

$$60x + 6 = -10$$

$-6 \quad -6$

$$\frac{60x}{60} = \frac{-16}{60 \div 4}$$

$$\boxed{x = \frac{-4}{15}}$$

$$b) \frac{14x}{7} + \frac{14(1)}{2} = \frac{2(14)}{7}$$

$$\frac{14x}{7} + \frac{14}{2} = \frac{28}{7}$$

$$2x + 7 = 4$$

$-7 \quad -7$

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

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

* multiply ALL terms by LCD
* simplify which gets rid of fraction.

* now simplify.

$$c) \frac{10(2)}{3} = 2 + \frac{10x(10)}{4}$$

$$\frac{24}{3} = 24 + \frac{10x}{4} \quad \text{simplify}$$

$$8 = 24 + 3x$$

~~-24~~ ~~-24~~

$$\frac{-16}{3} = \frac{3x}{3}$$

$$\boxed{\frac{-16}{3} = x}$$

$$d) \quad 6(4k) - \frac{6(5)}{3} = -\frac{(7)6}{2}$$

$$24k - \frac{30}{3} = -\frac{42}{2}$$

$$24k - 10 = -21$$

~~+10~~ ~~+10~~

$$\frac{24k}{24} = \frac{-11}{24}$$

$$\boxed{k = \frac{-11}{24}}$$

$$e) \quad -4\frac{2}{5} = -3\frac{1}{5} + \frac{7}{10}h$$

$$10(-\frac{22}{5}) = 10(-\frac{16}{5}) + 10(\frac{7}{10})h$$

$$\frac{-220}{5} = \frac{-160}{5} + \frac{70}{10}h \quad \text{like terms} \quad \boxed{4x + x} = 40$$

$$-44 = -32 + 7h$$

~~+32~~ ~~+32~~

$$\frac{-12}{7} = \frac{7h}{7}$$

$$\boxed{\frac{-12}{7} = h}$$

$$f) \quad \frac{8(x)}{2} + \frac{8(x)}{8} = 5(8)$$

$$\frac{8x}{2} + \frac{8x}{8} = 40$$

$$\frac{5x}{5} = \frac{40}{5}$$

$$\boxed{x = 8}$$