

Chapter 4 Guide Notes

A) Prior Knowledge

1) Solving algebraic equations by balancing:

- a) You can use _____ to solve an equation.
When you do, keep the equation balanced by performing _____ ,
_____, _____, or _____ by the
same non zero number on both sides.

- b) Also remember,

$$2 - 2 = 0 \text{ and } -2 + 2 = 0$$

$$\frac{2}{3} \div \frac{2}{3} = \frac{2}{3} \times \frac{3}{2} = \frac{6}{6} = 1$$

- c) Equivalent Equations =

B) Solving One-Step Equations

Solve each equation. Check your solution.

1) $x + 9 = 3$

2) $x - 2 = 11$

3) $-4x = -32$

$$4) \frac{2}{3}x = -9$$

$$5) -\frac{2}{7}x = 6$$

$$6) \frac{56}{16} = \frac{x}{2}$$

$$7) \frac{y}{9} = \frac{35}{15}$$

C) Two-Step Equations

Do the order of operations backwards!!!

PSMDAS \rightarrow SADMSP

$$1) \frac{x}{2} + 3 = 12$$

$$2) 5y - 7y = 6$$

3) The value of y is 7 more than 2 times the value of x . Find x when $y = 15$.

4) You have some change in your pocket. After you gave your friend \$0.40, you had \$1.10 left. Write an equation for the amount you originally had in your pocket. Then solve.

D) Multi-Step, With Variables on Both Sides of the Equation
Solve Each.

1) $8x - 3x - 10 = 20$

What is the Distributive Property?

Distributive Property =

2) $7x + 2(x + 6) = 39$

$$3) \ 5(4x + 1) - 3(5x - 6) = 38$$

$$4) \ \frac{3}{2}(3x + 5) = -24$$

$$5) \ 7 - 8x = 4x - 17$$

$$6) \ 6x - 5 = \frac{1}{4}(16x + 60)$$

$$7) \ 8y - 6 = \frac{2}{3}(6y + 15)$$