Name:

Date: _____

Notes: Solving Equations

Do Now: Solve for x in each of the equations.

1)
$$2.25(6x - 12) = -18 + 19.5x + 20$$

$$13.5 \times -27 = 19.5 \times +2$$

$$2) y = mx + b$$

Which value of x satisfies the equation $\frac{5}{6}(x + \frac{9}{20}) = 36$?

$$\frac{5}{5}(x) + \frac{5}{6}(\frac{9}{20}) = 36$$

$$\frac{5}{6}$$
 x + $\frac{3}{8}$ = 36

Putting Fractions in the Calculator:

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How about....

$$2x - 15 = 2x + 15$$



$$2x - 15 = 2x - 15$$



Solve the equation below for x in terms of k. 8(kx - 9) - 3kx = 28 - 13k

$$8(kx - 9) - 3kx = 28 - 13k$$

$$\frac{5kx}{5k} = \frac{100 - 13k}{5k}$$

$$x = \frac{100 - 13k}{5k}$$

The equation for the volume of a cylinder is $V = \pi r^2 h$. The positive value of r, in terms of h and V, is

$$V = \pi r^{2}h$$

$$V = \pi r^{2}h$$

$$V = r^{2}h$$

Factor out an 'x' on the left side of the equation!

Name:	Date:

Classwork: Solving Equations

Solve each of the equations for the variable stated. If no variable stated, solve for x.

1) Solve for
$$H$$
: $B = H + xH$

3) Solve for h:
$$V = \frac{1}{3}\pi r^2 h$$

2)
$$5(0.5x - 1.2) = \frac{5}{2}(x - 2.4)$$

Same

4)
$$4[0.3b + (-5)] + 12 = 0.8(2b - \frac{1}{2})$$

1.2b-20+12=1.6b-0-4

5)

The distance a free falling object has traveled can be modeled by the equation $d = \frac{1}{2}at^2$, where a is acceleration due to gravity and t is the amount of time the object has fallen. What is t in terms of a and d?

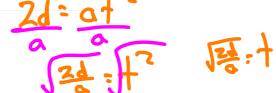
$$(1) \ t = \sqrt{\frac{da}{2}}$$

$$(3) \ t = \left(\frac{da}{d}\right)^2$$



$$(2) \ t = \sqrt{\frac{2d}{a}}$$

$$(4) \ \ t \ = \left(\frac{2d}{a}\right)$$



An equation is given below.

$$4(x - 7) = 0.3(x + 2) + 2.11$$

The solution to the equation is

$$(3) \ 3$$

(4) -3

$$4x-28=0.3\times+0.6+2.11$$
 $4x-28=0.3\times+0.6+2.71$
 $-0.3\times+2.8+2.8$
 $3.7\times=30.71$
 $3.7\times=3.7$
 $\times=8.3$

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The formula for blood flow rate is given by $F=\frac{p_1-p_2}{r}$, where F is the flow rate, p_1 the initial pressure, p_2 the final pressure, and r the resistance created by blood vessel size. Which formula can not be derived from the given formula?

$$(1) p_1 = Fr + p_3$$

$$(3) r = F(p_2 - p_1)$$

(2)
$$p_2 = p_1 - Fr$$

$$(4) \ \ r = \frac{p_1 - p_2}{F}$$

$$(r) F = \frac{P_1 - P_2}{r} (r)$$

8) The formula for the area of a triangle is $A = \frac{1}{2}bh$. Express b in terms of A and h.

$$b = \frac{2A}{h}$$

The area of a triangle is 45 square feet and its height is 3 ft. Find the **base** of the triangle.

h