

Solving Equations Review

1. Remember to Solve an equation means to **Isolate the variable** (*get it by itself*) and determine its value that will make the equation true (e.g. LS = RS)
2. When you are moving a term you are really doing the **opposite operation** to that term and doing it to both sides of the equation
3. If equations contain fractions... **CLEAR THE FRACTIONS!!**
4. If there is a number or letter in front of a set of brackets you must first **Expand (Distributive Property)** to remove the brackets

Solve the following Equations. Show work for each.

a) $x + 10 = 15$

b) $x - 20 = -4$

c) $\frac{x}{5} = -3$

d) $-8y = 32$

e) $3 - x = 7$

f) $3x + 4 = -5$

g) $\frac{x+4}{2} = 12$

h) $8(x + 3) = 40$

i) $-3 - 4y = -6$

j) $8x + 4 = 5x - 11$

k) $5(x - 2) = x + 2$

l) $x + 8 = 7$

m) $5x = -35$

n) $3 - x = 7$

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

p) $\frac{x+2}{3} = 2$

q) $\frac{x}{3} = \frac{4}{5}$

r) $\frac{3}{x} = \frac{7}{11}$

s) $7x - 4 = 12 - 3x$

MPM1D – Unit 3

$$t) \frac{x}{3} - 4 = \frac{1}{2}$$

$$u) 3(x + 3) = 5(x + 2) + 1$$

$$v) 5y - 18 = -8$$

$$w) 5m + 16 = 3m$$

$$x) 13t - 15 = 35 - 12t$$

$$y) 3(5m + 4) = 5(6m - 1)$$

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

$$z2) \frac{r+5}{4} + \frac{r-2}{3} = 7$$

Answers:

- | | | | | | | |
|------------|----------------------|-----------------------|------------------------|----------------------|-----------------------|-------------|
| a) $x = 5$ | b) $x = 16$ | c) $x = -15$ | d) $y = -4$ | e) $x = -4$ | f) $x = -3$ | g) $x = 20$ |
| h) $x = 2$ | i) $y = \frac{3}{4}$ | j) $x = -5$ | k) $x = 3$ | l) $x = -1$ | m) $x = -7$ | n) $x = -4$ |
| o) $x = 4$ | p) $x = 4$ | q) $x = \frac{12}{5}$ | r) $x = \frac{33}{7}$ | s) $x = \frac{8}{5}$ | t) $x = \frac{27}{2}$ | u) $x = -1$ |
| v) $y = 2$ | w) $m = -8$ | x) $t = 2$ | y) $m = \frac{17}{15}$ | z) $x = -60$ | z2) $r = 11$ | |

Homework/seat work: Pg 209 # 1, 2, 5, 7, 9, 11 + Shake/pair Page 8

Think, Pair Share on Solving Equations

Name A: _____

Name B: _____

Solve the following equations showing proper mathematical form.

PERSON A	PERSON B
$-4m = 16$	$\frac{d}{3} = -4$
$4y + 5 = -18$	$4 + 5v = -21$
$3d + 9 = 22 - 20d + 5$	$2w - 9 + 5w + 26 = 0$
$2(2m - 1) + 6(m + 2) = 7m$	$3(2u - 3) - (u + 4) = 3(u + 8)$

$$\frac{x-2}{3} - \frac{x-4}{5} = \frac{x-3}{3}$$

$$\frac{5t-3}{4} = \frac{t}{2} + 5$$

The equation $2(3m-4) = 5(m+7)$ has a solution of $m = 43$. VERIFY showing a proper check. DO NOT solve the equation.

The equation $2(x+4) + 5 = 6 - (x+2)$ has a solution of $x = -3$. VERIFY showing a proper check. DO NOT solve the equation.