Name: Key Date: _____

Mrs. Roumbos 8A Period____

Literal Equations Day 1 Homework

1) Solve for x:

$a + 12x = m$

$-a \quad -a$

$\frac{12x}{12} = \frac{m-a}{12}$

$\boxed{x = \frac{m-a}{12}}$

2) Solve for x:

$3x + 3b = 12$

$-3b \quad -3b$

$\frac{3x}{3} = \frac{12-3b}{3}$

$x = \frac{12-3b}{3}$

$x = \frac{12}{3} - \frac{3b}{3}$

$\boxed{x = 4 - b}$

3) Solve for x: must be in ( )

$3\left(\frac{8x-4f}{3}\right) = (a)3$

$8x - 4f = 3a$

$+4f \quad +4f$

$\frac{8x}{8} = \frac{3a+4f}{8}$

$\boxed{x = \frac{3a+4f}{8}}$

OR

$x = \frac{3a}{8} + \frac{4f}{8}$

$\boxed{x = \frac{3a}{8} + \frac{f}{2}}$

4) Solve for d:

$\frac{C}{\pi} = \frac{\pi d}{\pi}$

$\boxed{d = \frac{C}{\pi}}$

5) Solve for h: * must get rid of fraction 1st by multiplying by the reciprocal

$\frac{2}{1}(A) = \frac{1}{2}bh\frac{2}{1}$

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

$\boxed{h = \frac{2A}{b}} \quad b \neq 0$

6) Solve for r: (where $r > 0$) → It says this b/c you can't take the $\sqrt{}$ of a neg #

$\frac{A}{\pi} = \frac{\pi r^2}{\pi}$

$\sqrt{r^2} = \sqrt{\frac{A}{\pi}}$

$\boxed{r = \sqrt{\frac{A}{\pi}}}$

7) Solve for t:

$\frac{W}{VI} = \frac{VIt}{VI}$

$\boxed{t = \frac{W}{VI}} \quad V \neq 0, \; I \neq 0$

8) Solve for E:

$v^2\left(m\right) = \left(\frac{2E}{v^2}\right)v^2$

$\frac{v^2 m}{2} = \frac{2E}{2}$

$\boxed{E = \frac{v^2 m}{2}}$

9) Solve for P:

$S = 2A + Ph$

$-2A \quad -2A$

$\frac{S-2A}{h} = \frac{Ph}{h}$

$\boxed{P = \frac{S-2A}{h}} \quad h \neq 0$

10) Solve for r:

$V = \pi r^2 h$

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

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

$\boxed{r = \sqrt{\frac{V}{\pi h}}} \quad h \neq 0$

11) Solve x:

$ax + b = c$

$-b \quad -b$

$\frac{ax}{a} = \frac{c-b}{a}$

$\boxed{x = \frac{c-b}{a}} \quad a \neq 0$

12) Solve for a:

* get rid of fraction is

$\frac{g}{w}(F) = \left(\frac{w}{g}a\right)\frac{g}{w}$

$\boxed{a = \frac{g}{w}f}$ or $\boxed{a = \frac{gf}{w}}$

$w \neq 0$

13) Solve for t:

$\frac{2}{1}(S) = \frac{1}{2}gt^2\frac{2}{1}$

$\frac{2S}{g} = \frac{gt^2}{g}$

$\sqrt{t^2} = \sqrt{\frac{2S}{g}}$

$\boxed{t = \sqrt{\frac{2S}{g}}} \quad g \neq 0$

14) Solve for b:

$2(A) = \left(\frac{ab}{2}\right)2$

$\frac{2A}{a} = \frac{ab}{a}$

$\boxed{b = \frac{2A}{a}} \quad a \neq 0$

15) Solve for r: (where r > 0)

$\frac{3}{1}(V) = \frac{1}{3}\pi r^2 h\frac{3}{1}$

$\frac{3V}{\pi h} = \frac{\pi r^2 h}{\pi h}$

$\sqrt{r^2} = \sqrt{\frac{3V}{\pi h}}$

$\boxed{r = \sqrt{\frac{3V}{\pi h}}} \quad h \neq 0$

16) Solve for h:

$V = \pi r^2 h$

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

$\boxed{h = \frac{V}{\pi r^2}} \quad r \neq 0$