Name Key

Mrs. Roumbos

Date_____

8R Period____

Algebra II Mixed Review

1) Solve for x:

$3 \cdot \left(\frac{x+25}{3}\right) = (10) \cdot 3$

$x + 25 = 30$

$-25 \quad -25$

$\boxed{x = 5}$

2) Solve for y:

$-4 \cdot \left(\frac{y-6}{-4}\right) = (-7) \cdot -4$

$y - 6 = 28$

$+6 \quad +6$

$\boxed{y = 34}$

3) Solve for x:

$\frac{x}{3} - \frac{3x}{4} + \frac{1}{2} = -\frac{1}{3}$ rewrite 1st

$\left(\frac{1}{3}x - \frac{3}{4}x\right) + \frac{1}{2} = -\frac{1}{3}$

$-\frac{5}{12}x + \frac{1}{2} = -\frac{1}{3}$

$-\frac{1}{2} \quad -\frac{1}{2}$

$\left(-\frac{12}{5}\right)\left(-\frac{5}{12}\right)x = \left(-\frac{5}{6}\right)\left(-\frac{12}{5}\right)$

$\boxed{x = 2}$

4) Solve for x:

$2\frac{1}{3}x + 10 + 5\frac{2}{3}x - 9\frac{1}{2} = 12\frac{1}{2}$

$8x + \frac{1}{2} = 12\frac{1}{2}$

$-\frac{1}{2} \quad -\frac{1}{2}$

$\frac{8x}{8} = \frac{12}{8}$

$\boxed{x = 1\frac{1}{2}}$

5) Solve for a:

$\sqrt{a^2} = \frac{\sqrt{16}}{\sqrt{225}}$

$\boxed{a = \frac{4}{15}}$

Calc: 2nd x^2

6) Solve for b:

$\sqrt[3]{b^3} = \sqrt[3]{512}$

$\boxed{b = 8}$

Calc: 5 2nd ^

7) How many solution does the following equation have?

$2x - 4 = 2(x - 1) + 3$

D $2x - 4 = 2x - 2 + 3$

C $2x - 4 = 2x + 1$

$-2x \quad -2x$

M S

$-4 \neq 1$

No Zero solutions

✱ you must move the variables 1st

8) How many solution does the following equation have?

$8x + 4 = 4(2x + 1)$

D $8x + 4 = 8x + 4$

C $-8x \quad -8x$

M S

$4 = 4$

Infinitely many solutions

✱ you must move the variables 1st

9) How many solution does the following equation have?

$5x - 2x + 15 = 2x + 14$

D $3x + 15 = 2x + 14$

C $-2x$

M S $x + 15 = 14$

$-15 \quad -15$

$x = -1$

✱ you must move the variables 1st

10) Simplify:

$\sqrt[3]{64} = 4$

Calc: 3 2^{nd} ^