

Name _____

Mrs. Roubos

Date _____

8R Period _____

Algebra II Quiz Review

I. Solve the following

1) $\frac{g-2}{2} = -46$

2) $\frac{h+16}{5} = 10$

3) $\frac{c-1}{2} = 12$

4) $\frac{a-3}{28} = -3$

5) $2 + \frac{x}{2} + \frac{3x}{8} = 16$

6) $\frac{b}{2} + \frac{b}{3} - 20 = -10$

$$7) \frac{1}{4}b + \frac{2}{5}b - 5 = -3$$

$$8) \frac{3x}{5} - \frac{5x}{8} + \frac{1}{2} = -\frac{3}{7}$$

$$9) \sqrt{\frac{16}{25}}$$

$$10) \sqrt[3]{729}$$

$$11) x^2 = 144$$

$$12) x^3 = \frac{125}{343}$$

II. Solve and interpret the results. (one, none, or infinite amount)

$$13) 10y + 7 - 4y = -5 + 6y + 22$$

$$14) -2x - 6 = 2x + 6$$

$$15) 7(x - 2) = 7x - 14$$

$$16) 7b + 3 - 4b = 3 - 3(b + 4)$$

Algebra II Quiz Review

I. Solve the following

* must have the () on both sides!

1) $2 \cdot \left(\frac{g-2}{2}\right) = (46) \cdot 2$

$$\begin{array}{r} g-2 = -92 \\ +2 \quad +2 \\ \hline g = -90 \end{array}$$

2) $5 \cdot \left(\frac{h+16}{5}\right) = (10) \cdot 5$

$$\begin{array}{r} h+16 = 50 \\ -16 \quad -16 \\ \hline h = 34 \end{array}$$

3) $2 \cdot \left(\frac{c-1}{2}\right) = (12) \cdot 2$

$$\begin{array}{r} c-1 = 24 \\ +1 \quad +1 \\ \hline c = 25 \end{array}$$

4) $28 \cdot \left(\frac{a-3}{28}\right) = (-3) \cdot 28$

$$\begin{array}{r} a-3 = -84 \\ +3 \quad +3 \\ \hline a = -81 \end{array}$$

5) $2 + \frac{x}{2} + \frac{3x}{8} = 16$

$$2 + \left(\frac{1}{2}x\right) + \left(\frac{3}{8}x\right) = 16$$

D
C
S

$$2 + \frac{7}{8}x = 16$$

$$\begin{array}{r} -2 \quad -2 \\ \hline \left(\frac{8}{7}\right)\left(\frac{7}{8}x\right) = (14)\left(\frac{8}{7}\right) \end{array}$$

$$x = 16$$

6) $\frac{b}{2} + \frac{b}{3} - 20 = -10$

$$\left(\frac{1}{2}b\right) + \left(\frac{1}{3}b\right) - 20 = -10$$

D
C
M
S

$$\frac{5}{6}b - 20 = -10$$

$$\begin{array}{r} +20 \quad +20 \\ \hline \left(\frac{6}{5}\right)\left(\frac{5}{6}b\right) = (10)\left(\frac{6}{5}\right) \end{array}$$

$$b = 12$$

* Use $\boxed{A^b/c}$ button!

7) $\frac{1}{4}b + \frac{2}{5}b - 5 = -3$

D
C
M
S

$$\frac{13}{20}b - 5 = -3$$

$$\frac{13}{20}b = -5 + 3$$

$$\left(\frac{20}{13}\right)\left(\frac{13}{20}b\right) = (2)\left(\frac{20}{13}\right)$$

$$b = 3\frac{1}{13}$$

8) $\frac{3x}{5} - \frac{5x}{8} + \frac{1}{2} = -\frac{3}{7}$

D
C
M
S

$$\left(\frac{3}{5}x - \frac{5}{8}x\right) + \frac{1}{2} = -\frac{3}{7}$$

$$-\frac{1}{40}x + \frac{1}{2} = -\frac{3}{7}$$

$$\left(\frac{40}{1}\right)\left(-\frac{1}{40}x\right) = \left(-\frac{13}{14}\right)\left(\frac{40}{1}\right)$$

$$x = 37\frac{1}{7}$$

9) $\sqrt{\frac{16}{25}} = \frac{\sqrt{16}}{\sqrt{25}}$

$$\frac{4}{5}$$

10) $\sqrt[3]{729} = 9$

11) $\sqrt{x^2} = \sqrt{144}$ *must show this work*

$$x = 12$$

12) $\sqrt[3]{x^3} = \frac{\sqrt[3]{125}}{\sqrt[3]{343}}$ *must show this work*

$$x = \frac{5}{7}$$

16: $\boxed{2nd}$ $\boxed{x^2}$ Calc: $\boxed{3}$ $\boxed{2nd}$ $\boxed{\wedge}$

II. Solve and interpret the results. (one, none, or infinite amount)

13) $10x + 7 - 4y = -5 + 6y + 22$

D
C
M
S

$$6y + 7 = 17 + 6y$$

$$-6y \quad -6y$$

$$7 \neq 17$$

NO/zero solutions

14) $-2x - 6 = 2x + 6$

$$\begin{array}{r} +2x \quad +2x \\ -6 = 4x + 6 \\ -6 \quad -6 \end{array}$$

$$-12 = 4x$$

$$\frac{-12}{4} = \frac{4x}{4}$$

$x = -3$ **one solution**

Must move the variable
By you move the constants in this section

15) $7(x - 2) = 7x - 14$

$$7x - 14 = 7x - 14$$

$$-7x \quad -7x$$

$$-14 = -14 \checkmark$$

Infinitely many

16) $7b + 3 - 4b = 3 - 3(b + 4)$

D
C
M
S

$$7b + 3 - 4b = 3 - 3b - 12$$

$$3b + 3 = -9 - 3b$$

$$+3b \quad +3b$$

$$6b + 3 = -9$$

$$\frac{6b}{6} = \frac{-12}{6}$$

$$b = -2$$

b = -2 / one solution