

Name: \_\_\_\_\_

Mrs. Roumbos

Date: \_\_\_\_\_

8R Period \_\_\_\_\_

*Extra Algebra Review*1) What is the solution for  $c$  given the equation

$$\frac{3}{4}c - 11 = 13?$$

2) What is the solution for  $x$  given the equation

$$\frac{4}{5}x + 23 = -25?$$

3) What is the value of  $x$  in the equation

$$x + \frac{2}{5} = \frac{3}{4}?$$

4) What is the solution of the equation

$$3y - 5y + 10 = 36?$$

5)  $3s + 5 = 17$

6)  $8x + 5 = 61$

7)  $\frac{x}{24} = \frac{3}{8}$

8)  $-10.5 = 7x + 3.5$

9)  $6x = 30 + x$

10)  $14m = 34 - 3m$

Questions 5 through 16 refer to the following:

Solve the given equation for the variable:

11)  $4y + 14 = 5y + 8$

12)  $5x - 2x + 15 = 2x + 14$

13)  $b + b + 1 = 39$

14)  $z - 11 = 14$

15)  $24y = -48$

16)  $-\frac{2}{3}x = -6$

17) If  $x + 45 = 91$ , what is the value of  $x$ ?

18) If  $x - 46 = 96$ , what is the value of  $x$ ?

19) If  $2(x + 3) = x + 10$ , then  $x$  equals

20) What is the value of  $n$  in the equation  $0.6(n + 10) = 3.6$ ?

21) What is the value of  $x$  in the equation  $5(2x - 7) = 15x - 10$ ?

22) What is the value of  $x$  in the equation  $13x - 2(x + 4) = 8x + 1$ ?

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## Extra Algebra Review

- 1) What is the solution for
- $c$
- given the equation

$$\frac{3}{4}c - 11 = 13?$$

All +11

$$\left(\frac{4}{3}\right) \cdot \left(\frac{3}{4}c\right) = \left(\frac{24}{3}\right) \left(\frac{4}{3}\right)$$

$$c = 32$$

- 2) What is the solution for
- $x$
- given the equation

$$\frac{4}{5}x + 23 = -25?$$

-23 -23

$$\left(\frac{5}{4}\right) \left(\frac{4}{5}x\right) = \left(\frac{48}{4}\right) \left(\frac{5}{4}\right)$$

$$x = -60$$

- 3) What is the value of
- $x$
- in the equation

$$x + \frac{2}{5} = \frac{3}{4}?$$

 $-\frac{2}{5} -\frac{2}{5}$ 

$$x = \frac{7}{20}$$

- 4) What is the solution of the equation

$$3y - 5y + 10 = 36?$$

$$-2y + 10 = 36$$

 $-10 -10$ 

$$-2y = 26$$

 $-2 -2$ 

$$y = -13$$

Questions 5 through 16 refer to the following:

Solve the given equation for the variable:

5)  $3s + 5 = 17$

 $-5 -5$ 

$$\frac{3s}{3} = \frac{12}{3}$$

$$s = 4$$

6)  $8x + 5 = 61$

 $-5 -5$ 

$$\frac{8x}{8} = \frac{56}{8}$$

$$x = 7$$

7)  $24 \left(\frac{x}{24}\right) = \left(\frac{3}{8}\right) (24)$

$$-x = 9$$

8)  $-10.5 = 7x + 3.5$

 $-3.5 -3.5$ 

$$\frac{-14}{7} = \frac{7x}{7}$$

$$x = -2$$

9)  $6x = 30 + x$

 $-x -x$ 

$$\frac{5x}{5} = \frac{30}{5}$$

$$x = 6$$

10)  $14m = 34 - 3m$

 $+3m +3m$ 

$$\frac{17m}{17} = \frac{34}{17}$$

$$m = 2$$

11)  $4y + 14 = 5y + 8$

$$\begin{array}{r} -4y \quad -4y \\ \hline 14 = 1y + 8 \\ -8 \quad -8 \\ \hline 6 = 1y \\ \frac{6}{1} = \frac{1y}{1} \quad \boxed{y=6} \end{array}$$

12)  $5x - 2x + 15 = 2x + 14$

D  
C  
M  
S

$$\begin{array}{r} 3x + 15 = 2x + 14 \\ -2x \quad -2x \\ \hline 1x + 15 = 14 \\ -15 \quad -15 \\ \hline 1x = -1 \quad \boxed{x=-1} \end{array}$$

13)  $(b+b)+1=39$

$$\begin{array}{r} 2b + 1 = 39 \\ -1 \quad -1 \\ \hline 2b = 38 \\ \frac{2b}{2} = \frac{38}{2} \\ \boxed{b=19} \end{array}$$

14)  $z - 11 = 14$

$$\begin{array}{r} +11 \quad +11 \\ \hline \boxed{z=25} \end{array}$$

15)  $\frac{24y}{24} = \frac{-48}{24}$

$$\boxed{y=-2}$$

16)  $-\frac{2}{3}x = -6$

$$\left(-\frac{3}{2}\right) \left(-\frac{2}{3}x\right) = \left(-6\right) \left(-\frac{3}{2}\right)$$

$$\boxed{x=9}$$

17) If  $x + 45 = 91$ , what is the value of  $x$ ?

$$\begin{array}{r} -45 \quad -45 \\ \hline \boxed{x=46} \end{array}$$

18) If  $x - 46 = 96$ , what is the value of  $x$ ?

$$\begin{array}{r} +46 \quad +46 \\ \hline \boxed{x=142} \end{array}$$

19) If  $2(x+3) = x+10$ , then  $x$  equals

D  
C  
M  
S

$$\begin{array}{r} 2x + 6 = x + 10 \\ -x \quad -x \\ \hline 1x + 6 = 10 \\ -6 \quad -6 \\ \hline 1x = 4 \\ \frac{1x}{1} = \frac{4}{1} \quad \boxed{x=4} \end{array}$$

20) What is the value of  $n$  in the equation  $0.6(n+10) = 3.6$ ?

D  
C  
M  
S

$$\begin{array}{r} 0.6n + 6 = 3.6 \\ -6 \quad -6 \\ \hline 0.6n = -2.4 \\ \frac{0.6n}{0.6} = \frac{-2.4}{0.6} \\ \boxed{n=-4} \end{array}$$

21) What is the value of  $x$  in the equation  $5(2x-7) = 15x-10$ ?

D  
C  
M  
S

$$\begin{array}{r} 10x - 35 = 15x - 10 \\ -10x \quad -10x \\ \hline -35 = 5x - 10 \\ +10 \quad +10 \\ \hline -25 = 5x \\ \frac{-25}{5} = \frac{5x}{5} \quad \boxed{x=-5} \end{array}$$

22) What is the value of  $x$  in the equation  $13x - 2(x+4) = 8x + 1$ ?

D  
C  
M  
S

$$\begin{array}{r} 13x - 2x - 8 = 8x + 1 \\ 11x - 8 = 8x + 1 \\ -8x \quad -8x \\ \hline 3x - 8 = 1 \\ +8 \quad +8 \\ \hline 3x = 9 \\ \frac{3x}{3} = \frac{9}{3} \quad \boxed{x=3} \end{array}$$