

Test Practice

Solve each equation.

Name Solutions ID: 1

Date _____ Period _____

1) $54v = 594$

$$\frac{54v}{54} = \frac{594}{54}$$

$$v = 11$$

$$\begin{array}{r} 11 \\ 54 \overline{) 594} \\ \underline{-54} \\ 54 \\ \underline{-54} \\ 0 \end{array}$$

2) $-98 - x = -131$

$$\begin{array}{r} +98 \\ -98 - x = -131 \\ \hline \end{array}$$

$$-x = -33$$

$$x = 33$$

Different signs, so subtract

$$\begin{array}{r} 131 \\ -98 \\ \hline \end{array}$$

33
but negative wins

$$\text{so } -131$$

$$\begin{array}{r} +98 \\ -131 \\ \hline -33 \end{array}$$

3) $x - (-62) = 14$

$$x + 62 = 14$$

$$\begin{array}{r} -62 \\ x + 62 = 14 \\ \hline \end{array}$$

$$x = -48$$

$$\begin{array}{r} -62 \\ +14 \\ \hline -48 \end{array}$$

4) $\frac{x}{6} = -20$

$$\frac{x}{6} \cdot 6 = -20 \cdot 6$$

$$x = -120$$

5) $7r + 7 = 28$

$$\begin{array}{r} -7 \\ 7r + 7 = 28 \\ \hline \end{array}$$

$$7r = 21$$

$$r = 3$$

6) $49n = 637$

$$\frac{49n}{49} = \frac{637}{49}$$

$$n = 13$$

$$\begin{array}{r} 13 \\ 49 \overline{) 637} \\ \underline{-49} \\ 147 \\ \underline{-147} \\ 0 \end{array}$$

7) $\frac{b}{47} = -26$

$$\frac{b}{47} \cdot 47 = -26 \cdot 47$$

$$b = -1222$$

8) $v + 58 = 118$

$$\begin{array}{r} -58 \\ v + 58 = 118 \\ \hline \end{array}$$

$$v = 60$$

Find the number of terms in each equation. Also, write the role of each term (coefficient, variable, constant)

9) $-7p + 5p + 12$

10) $-7b - b + 6 - 4$

11) $7 + 8x + 6x - 3$

12) $1 + 3m + 7 - 3m$

Simplify each expression.

$$13) -7k - 7k = \boxed{-14k}$$

$$\begin{aligned} 14) -4 + 10x + x + 6 \\ = \underbrace{-4 + 6} + \underbrace{10x + x} \\ = \boxed{2 + 11x} \end{aligned}$$

$$15) 10r - 9r = \boxed{r}$$

$$\begin{aligned} 16) 5(x-3) + 12 \\ = 5x - 15 + 12 \\ = 5x - 3 \end{aligned}$$

$\begin{array}{r} -15 \\ +12 \\ \hline -3 \end{array}$

- 17) Natalie is cooking pancakes. The recipe calls for $\frac{13}{3}$ cups of flour. She accidentally put in $\frac{31}{7}$ cups. How many extra cups did she put in? Write an equation to solve.

accident recipe extra cups

$$\frac{31}{7} = \frac{13}{3} + x$$

- 18) For babysitting Ming was given \$9. Now she has \$36. How much money did she have before? Write an equation to solve.

babysitting before Now

$$9 + x = 36$$

- 19) Last week Mary ran 28.4 miles less than Nicole. Mary ran 18.9 miles. How many miles did Nicole run? Write an equation to solve.

Mary Nicole miles less

$$18.9 = x - 28.4$$

- 20) If the weight of a package is multiplied by $\frac{3}{8}$ the result is 21 pounds. Find the weight of the package. Write an equation to solve.

weight result

$$\frac{3}{8} x = 21$$

Solve each inequality and graph its solution.

21) $\frac{4}{5} + n \leq \frac{39}{5}$



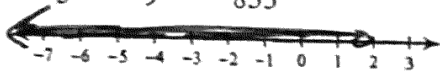
$$\frac{4}{5} + n \leq \frac{39}{5}$$

$$-\frac{4}{5} \quad -\frac{4}{5}$$

$$n \leq \frac{35}{5}$$

$$n \leq 7$$

23) $\frac{3}{5}b - 3\frac{5}{9} < -2\frac{547}{855}$



$$\frac{3}{5}b - 3\frac{5}{9} + 3\frac{5}{9} < -2\frac{547}{855} + 3\frac{5}{9}$$

$$\frac{3}{5}b < -\frac{2257}{855} + \frac{32(95)}{9 \cdot 95}$$

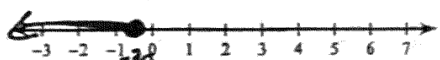
$$\frac{3}{5}b < \frac{-2257 + 3040}{855}$$

$$b < \frac{261}{171}$$

$$b < 1\frac{90}{171}$$

$$\frac{8}{5} \cdot \frac{3}{5}b < \frac{793}{855} \cdot \frac{5}{3} = \frac{261}{171}$$

25) $3\frac{1}{4}x + \frac{3}{5} \leq -\frac{23}{70}$



$$\frac{13}{4}x + \frac{3}{5} \leq -\frac{23}{70}$$

$$-\frac{3}{5} \quad -\frac{3}{5}$$

$$\frac{13}{4}x \leq -\frac{23}{70} - \frac{3}{5} \cdot \frac{14}{14}$$

$$\frac{13}{4}x \leq -\frac{23}{70} - \frac{52}{70}$$

$$\frac{13}{4}x \leq -\frac{75}{70}$$

$$\frac{4}{13} \cdot \frac{13}{4}x \leq -\frac{15}{28} \cdot \frac{4}{13}$$

$$x \leq -\frac{30}{91}$$

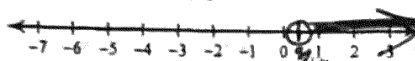
27) $2.9n < -44.37$



$$\frac{2.9n}{2.9} < \frac{-44.37}{2.9}$$

$$n < -15.3$$

22) $n - 1\frac{3}{4} > -\frac{53}{36}$



$$n - 1\frac{3}{4} > -\frac{53}{36}$$

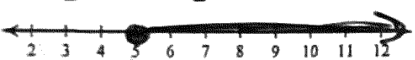
$$n - \frac{7}{4} > -\frac{53}{36}$$

$$+\frac{7}{4} \quad +\frac{7}{4} \cdot \frac{9}{9}$$

$$n > -\frac{53}{36} + \frac{63}{36} \Rightarrow n > \frac{10}{36} \cdot \frac{5}{18}$$

$$n > \frac{5}{18}$$

24) $1\frac{1}{2} - n \leq -6\frac{1}{2}$



$$\frac{3}{2} - n \leq -\frac{13}{2}$$

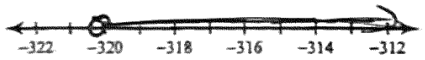
$$+\frac{3}{2} \quad +\frac{3}{2}$$

$$-n \leq -\frac{10}{2}$$

$$-n \leq -5$$

$$n \geq 5$$

26) $\frac{n}{19.2} > -16.7$



$$\frac{n}{19.2} (19.2) > -16.7 (19.2)$$

$$n > -320.64$$

28) Determine whether each ordered pair is a solution to this equation: $y = 2x - 4$

a.) $(8, 12) \rightarrow x=8, y=12 \rightarrow 12 = 2(8) - 4 \checkmark$

b.) $(3, 3) \rightarrow x=3, y=3 \rightarrow 3 = 2(3) - 4 \times$

c.) $(5, 4) \rightarrow x=5, y=4 \rightarrow 4 = 2(5) - 4 \times$

d.) $(1, -4) \rightarrow x=1, y=-4 \rightarrow -4 = 2(1) - 4 \times$

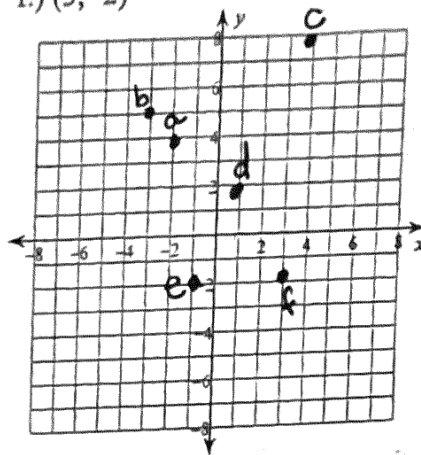
e.) $(4, 4) \rightarrow x=4, y=4 \rightarrow 4 = 2(4) - 4 \checkmark$

- 29) Create a table of values for this equation:
 $y = 5x - 6$ for $x = 1, 3, 5, 7, 9$

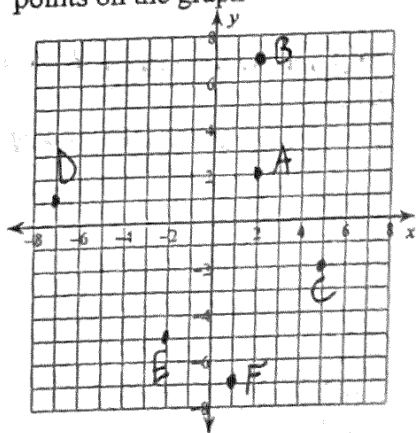
| x | $y = 5x - 6$ |
|-----|------------------------------|
| 1 | $y = 5(1) - 6 = -1$ |
| 3 | $y = 5(3) - 6 = 15 - 6 = 9$ |
| 5 | $y = 5(5) - 6 = 25 - 6 = 19$ |
| 7 | $y = 5(7) - 6 = 42 - 6 = 36$ |
| 9 | $y = 5(9) - 6 = 45 - 6 = 39$ |

- 30) Graph these ordered pairs on the graph:

- a.) $(-2, 4)$
- b.) $(-3, -5)$
- c.) $(4, 8)$
- d.) $(1, 2)$
- e.) $(-1, -2)$
- f.) $(3, -2)$



- 31) Write the ordered pair of the following points on the graph



- A = $(2, 2)$
- B = $(2, 7)$
- C = $(5, -2)$
- D = $(-7, 1)$
- E = $(-2, -5)$
- F = $(1, -7)$