

Name: \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_ Score: \_\_\_\_\_

## Unit 1 Review - Solving Equations & Inequalities

1 - 3 DIRECTIONS: Using these symbols, determine the meaning of each expression. If the expression has no meaning, write "no meaning".

B	Number of Burgers ordered	1) $(B)(P_B)$
F	Number of Fries ordered	2) $P_F + D$
D	Number of Drinks ordered	3) $P_D + P_B + P_F$
$P_D$	Price for a Drink	
$P_B$	Price for one Burger	
$P_F$	Price for one order of Fries	

Solve each equation.

4)  $-3(4 - 2x) = -5 - 4x$

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

6)  $1.1x - 3.45 + 2.3 = -1.15 - 3.2x$

7)  $-2 + 7m - 11 = 8m - 13 - m$

8)  $4 - 4x + 5(x - 3) = 6x - 2 - 5x$

9)  $5 - 3n = -8$

10) Angle M and angle N are complementary. The measure of angle M is represented by the expression  $4x + 4$  and the measure of angle N is represented by the expression  $2(3x - 7)$ . What is the value of  $x$ ? What are the measures of angle M and angle N?

$$x = \underline{\hspace{2cm}}$$

$$\text{Measure of Angle M} \underline{\hspace{2cm}}$$

$$\text{Measure of Angle N} \underline{\hspace{2cm}}$$

11) Joe has worked out the problem below, but when he checked his answer, he knew it was wrong. **Explain** what mistake Joe made, then solve the equation correctly.

$$3x + 4(2x - 6) = -2x + 7$$

$$3x + 8x - 6 = -2x + 7$$

$$11x - 6 = -2x + 7$$

$$\begin{array}{r} +2x \quad +2x \\ \hline \end{array}$$

$$13x - 6 = 7$$

$$\begin{array}{r} +6 \quad +6 \\ \hline \end{array}$$

$$13x = 13$$

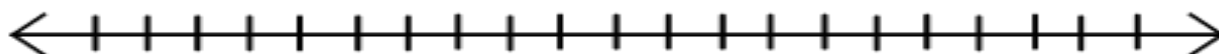
$$x = 1$$

12) **Solve for  $h$ :**  $V = \pi r^2 h$

13) **Write the function  $x$  in terms of  $y$ :**  $3x + 9y = 12x + 4 - 2y$

14) Explain the difference between a solid dot and an open circle when graphing inequalities on a number line:

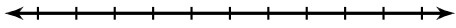
15) **Solve and graph this inequality:**  $-2(x + 5) < 4$



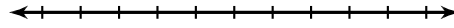
16) A. **Solve the inequality for x:**  $\frac{3}{4}x - \frac{2}{3} > \frac{2}{3}x - \frac{1}{2}$

B. **Give two possible solutions for x.**

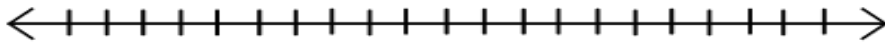
17) **Graph:**  $17 \leq x < 21$



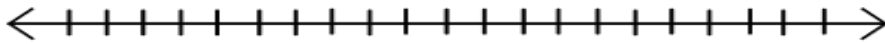
18) **Graph:**  $-3 \leq x$



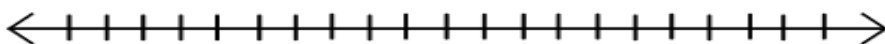
19) **Graph the compound inequality:**  $x \leq -6$  or  $x > -1$



20) **Solve and graph:**  $-3|3 + x| = -33$



21) A. **Solve and graph:**  $24 + |x - 9| \geq 29$



B. **Write the compound inequality to represent the graph in part A.**