

Test 1 Prep Group work - **No Calculator!**

1. Completely simplify each expression. Make sure that you present your work using the proper format.

a. Simplify $2 - (x - 5)$.

b. Simplify $-2 + 3(y - 7) + 4y$.

c. Simplify $8d - [6 - (-2d - 6)]$.

d. Simplify $0.1(80x^2 - 90x) - (14x - 6x^2)$.

2. Evaluate $\frac{8-x}{x-8} + 3(x^2 - x)$ when $x = -7$.

3. Determine whether or not -31 is a solution to the equation $-4t - 122 = \frac{3t(t+33)}{t+30}$.

4. If $x = 2$, which of the following evaluate to 4? x^2 , $-x^2$, $(-x)^2$

5. If $x = -2$, which of the following evaluate to 4? x^2 , $-x^2$, $(-x)^2$

6. Find the value of $\frac{(-32)(12)(-75)(-52)(51)}{(16)(-12)(-15)(-26)(-17)}$; remember ... **no calculator!**

7. Find each sum/difference/product/quotient and reduce the result; remember ... **no calculator!**

a. $-5\frac{2}{3} + 9$

b. $8 - 8\frac{2}{3}$

c. $\left(\frac{1}{2}\right)\left(-\frac{8}{7}\right)$

d. $-\frac{5}{4} \div \left(-\frac{1}{2}\right)$

e. $-\frac{5}{4} \div 2 \times 3$

f. $-\frac{9}{14} - \frac{19}{21}$

g. $\frac{-13}{12} - \left(-\frac{7}{8}\right)$

h. $-5 + \frac{1}{2}$

8. Write an equation that models the following. You may use x as the mystery number.

Twelve less than five times a certain mystery number is equal to the same mystery number tripled and added to six. What is this mystery number?

9. Complete each sentence with one of the words/phrases/numbers/names below. Word up ...pick the one that makes the sentence true!

0	commutative property	additive inverse	numerator	difference
1	distributive property	multiplicative inverse	denominator	positive
4	associative property	additive identity	opposite	Sara Palin
87	order of operations	multiplicative identity	dingo	negative

- a. If you multiply 87 with its multiplicative inverse the result is _____.
- b. $3(4 + 7) = 3 \cdot 4 + 3 \cdot 7$ is an example of the _____.
- c. -2^2 is _____.
- d. When reading aloud $-(-6)$, the first minus sign is read as _____ and the second minus sign is read as _____.
- e. $6 \cdot 9 + 8 \cdot 7 = 8 \cdot 7 + 6 \cdot 9$ is an example of the _____.
- f. One former governor of Alaska is called _____.
- g. $12 + 7 + 9 = 19 + 9$ is an example of _____.
- h. If the opposite of $|x|$ is not zero, then it is definitely _____.
- i. A word that rhymes with bingo is _____.
- j. $8 + 5 + (-5) = 8 + 0$ is an unconscious application of the _____.