

Warm Up: Simplify or evaluate

1. $5-x-3(2x-8)-7x$ 2. $-(3x+4)-(2-5x)$ 3. $6-3|-7+2|$

$$\begin{array}{r} 5-x-6x+24-7x \\ \hline -14x+29 \end{array}$$

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

$$\begin{array}{r} 6-3|-5| \\ 6-3(5) \\ 6-15 \\ \hline -9 \end{array}$$

Name: KEY Period: _____ Date: _____
Algebra Quiz 1 Review

1. Identify the following in the expression $4x + 7 - 2xy + y$

Coefficients: 4, -2, 1 Constants: 7

How many terms does the expression have? 4

2. Evaluate the expression $-2x + 8 + 5y - (-1)$ when $x=-5$ and $y=4$.

$$\begin{aligned} & -2(-5) + 8 + 5(4) - (-1) \\ & \frac{10 + 8 + 20 + 1}{18 + 20 + 1} \rightarrow \frac{38 + 1}{39} \end{aligned}$$

4. Evaluate the expression $6 - 8^2 + 5 - (-3)^2$ $(-3)^2$

$$\begin{aligned} & 6 - 64 + 5 - (-9) \\ & \frac{-58 + 5 + 9}{-53 + 9} \rightarrow \boxed{-44} \end{aligned}$$

3. Evaluate the expression $4x - x^2 - 2y$ when $x=-3$ and $y=-1$.

$$\begin{aligned} & 4(-3) - (-3)^2 - 2(-1) \\ & \frac{-12 - 9 + 2}{-21 + 2} \rightarrow \boxed{-19} \end{aligned}$$

5. Evaluate the expression $5 - 2|-2(3) + 4|$

NEVER Distribute to absolute value!

$$\begin{aligned} & 5 - 2|-6 + 4| \\ & 5 - 2|-2| \rightarrow \frac{5 - 4}{1} \rightarrow \boxed{1} \end{aligned}$$

6. Simplify the expression $4a + 7b + b - 3a$.

$$\boxed{a + 8b}$$

7. Simplify the expression $3 - (4x - 7)$

$$\frac{3 - 4x + 7}{-4x + 10}$$

8. Simplify: $5 - 2(6x - 1) + 6x(-2 - 3x)$

$$\begin{aligned} & \underline{5} - \underline{12x} + \underline{2} - \underline{12x} - \underline{18x^2} \\ & \boxed{-18x^2 - 24x + 7} \end{aligned}$$

9. Simplify: $3r^2s + 3r^2 - sr^2 + 8rs^2 + s^2$

$$\boxed{2r^2s + 3r^2 + 8rs^2 + s^2}$$

For questions 10-15, translate each sentence into algebraic expression, equation, or inequality.

10. Five less than the product of three and a number $3x - 5$

11. Six times (the difference of a number and two) is at least seven $6(x - 2) \geq 7$

12. The quotient of a number squared and eight is equivalent to ten $x^2 \div 8 = 10$ / $\frac{x^2}{8} = 10$

13. Ten less than a number is less than the sum of three and the same number $x - 10 < 3 + x$

★ 14. A textbook subscription costs \$20 for the first copy, and \$18 for each additional copy $20 + 18(x - 1)$

15. Michael's age is at least three more than twice Alex's age $M \geq 2A + 3$
 Yes, you can use two different variables

Horse Race!

When you are done you may work on the simplifying expressions
pyramid puzzle

