Expressions Test Review Name Key

Quiz to include: Writing Expressions, Simplifying Expressions, Distributive Property and Combining Like Terms

1. **Craig's Cruiser tokens cost one dollar for 5. How many tokens can Jarod buy for each amount of money in the table?**

Jarod Has...	Tokens Jarod Can Buy	
	Expression	Amount
$6.00	$6 \cdot 5$	$30
$4.00	$4 \cdot 5$	$20
$15.00	$15 \cdot 5$	$75
d dollars	$d \cdot 5$	$5d$

+4

2. **Write a variable expression for the following word phrases.**

a. p divided by 2 a. $\frac{p}{2}$

b. three more than z b. $z+3$

c. the product of a number m and 5 c. $5m$

+4

d. 9 less than j d. $j-9$

3. **Identify each expression as a numerical or variable expression.**

a. $(6x + 7) + 5x$ a. Variable

b. $2 - (9+3)$ b. numerical

c. $4x$ c. Variable

4. Bobby Sue was getting her equipment ready for volleyball try outs. She needed to make sure she had her kneepads, shoes, shorts and hair ties. Unfortunately, she found her dog Rosco eating her volleyball shoes. When Bobby Sue went online to MC Sports looking for another pair, she would have to pay for the shoes, plus a $6.00 shipping fee. Write an expression to represent the cost of the shoes.

Define Variables: Let s = cost of shoes

Expression: $s + 6$

If just the shoes cost $125, what would the total cost be to purchase the shoes online?

$125 + 6 = \boxed{\$131}$

5. Evaluate each expression. (substitute and solve)

a. $4m + 3 + 6m - 3(4m + 2)$ for $m = 5$

$4(5) + 3 + 6(5) - 3(4 \cdot 5 + 2)$

$20 + 3 + 30 - 3(20 + 2)$

$20 + 3 + 30 - 3(22)$

$20 + 3 + 30 - 66$

$23 + 30 - 66$

$53 - 66$

$\boxed{-13}$

b. $3ab - c + ac - 4a$, for $a = 4$, $b = 2$, and $c = 5$

$3(4)(2) - 5 + 4(5) - 4(4)$

$12(2) - 5 + 20 - 16$

$24 - 5 + 20 - 16$

$19 + 20 - 16$

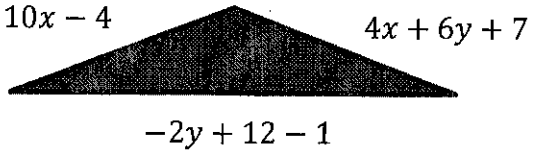
$39 - 16$

$\boxed{23}$

6. For the expressions below, name the coefficients, any like terms, and any constants.

Expression	Coefficients	Like Terms	Constants
$9 + 3n + 9n + f$	3, 9, 1	$3n + 9n$	9
$-8a + 7a - k + 8$	$-8, 7, -1$	$-8a + 7a$	8
$4y - 9r$	$4, -9$	None	None

7. Find the perimeter of the figure below. Circle your final solution.



$\boxed{14x + 6y + 14}$

8. First rewrite each expression using addition. Then, simplify each expression by combining like terms. Circle your final answer.

a. $9.2h + 7r + 8.5 + 5h + 3.3$

$14.2h + 7r + 11.8$

b. $-2 + 7 + 3d - 4d + 3$

$-d + 8$

c. $2k - \frac{1}{2}k - 4k + 9 - 11$

$-2\frac{1}{2}k - 2$

8. Use the Distributive Property to Solve

$\frac{1}{2}(-12n - 6s)$

$-6n - 3s$

$-8(3h - 5t + 10y)$

$-24h + 40t - 80y$

$3(9q - 6r - 5p)$

$27q - 18r - 15p$

9. Use the distributive property to write an expression for the following scenario. A student spends \$1.25 on a pack of gum and \$0.99 on a 20 oz of pop everyday. How much money would they spend for x days?

$x(1.25 + 0.99)$

$1.25x + 0.99x$

$2.24x$

10. **Simplify by first using the distributive property, second rewriting each expression using addition, and finally by combining like terms.**

a. $\frac{1}{4}(h + 4) + 3h$

$\frac{1}{4}h + 1 + 3h$

$3\frac{1}{4}h + 1$

b. $4g + 2(3g + 5)$

$4g + 6g + 10$

$10g + 10$

c. $-3(5r + 7) - 8.2$

$-15r - 21 - 8.2$

$-15r - 29.2$

d. $6(3u - 3) + 12u - 4$

$18u - 18 + 12u - 4$

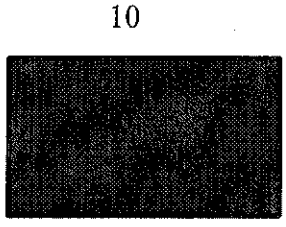
$30u - 22$

e. $\frac{1}{3}(k + 6) + 3(2k - 2) + 10k$

$\frac{1}{3}k + 2 + 6k - 6 + 10k$

$16\frac{1}{3}k - 4$

11. Find the **area** of the figure below. Circle your final solution.



$10(4x + 5)$

$40x + 50$