Quiz Review

Name Key

Distributive Property and Combining Like Terms

For # 1 - 4, simplify each expression. Circle you final answer.

1. $7(-8n+1)$

$7 \cdot -8n + 7 \cdot 1$

$\boxed{-56n + 7}$

2. $-6(4n-2p+5)$

$-6 \cdot 4n + +6 \cdot 2p - 6 \cdot 5$

$\boxed{-24n + 12p - 30}$

3. $\frac{1}{2}(10y+22)$

$\frac{1}{2} \cdot 10y + \frac{1}{2} \cdot 22$

$\boxed{5y + 11}$

4. $0.25(16x-4)$

$0.25 \cdot 16x - 0.25 \cdot 4$

$\boxed{4x - 1}$

5. THINK ABOUT IT. Look at the following two questions. You will notice they are the same. Show two DIFFERENT ways you can simplify the two problems. Below your answer, JUSTIFY your reasoning for each method you chose.

METHOD 1	METHOD 2
$3(2-4)$ $3(-2)$ -6 I used the order of operations to simplify the parenthesis and then multiplied by 3. My final answer was -6	$3(2-4)$ $3 \cdot 2 - 3 \cdot 4$ $6 - 12$ -6 I used the distributive property to multiply each term in the parenthesis by 3, and then I combined like terms. My final answer was -6.

For # 6 - 8, simplify each expression. Circle your final answer.

6. $4x - 2x + 7x - 14x + 3 - 2x$

$-7x + 3$

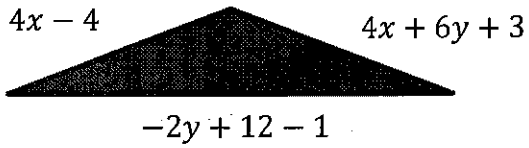
7. $-8y + 3z - 2y + 7 - 10 + 4y - z$

$-6y + 2z - 3$

8. $2 - 8 + 4 - 6b - b - c - b + c$

$-8b - 2$

9. THINK ABOUT IT. For the following question, find the perimeter of the figure. Once you have found your answer, use the lines provided to JUSTIFY how you know your answer is correct.



$8x + 4y + 10$

First, because I was finding the perimeter, I knew I had to add up all the sides. Since all the sides are expressions I had to combine like terms. I added all the x terms together first (4x+4x) to get 8x. Next I added the y terms (6y + -2y) to get 4y, and lastly I combined the constant terms (-4+3+12-1) to get +10. Writing all the results together I got a perimeter of $8x + 4y + 10$.

For # 10 - 12, simplify each expression. Circle your final answer.

10. $7(x + 4) - 10x$

$7x + 28 - 10x$

$-3x + 28$

11. $4 + 2(-4x - 3)$

$4 - 8x - 6$

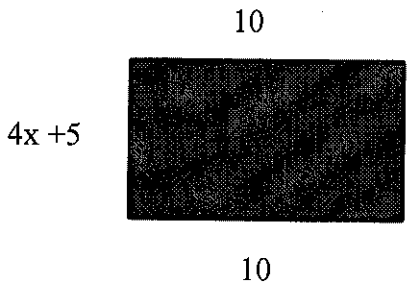
$-8x - 2$

12. $-(-2x + 4) + 3(x - 6)$

$+2x - 4 + 3x - 18$

$5x - 22$

13. Find the area of the following rectangle. Circle your final answer.



$10(4x+5)$

$\boxed{40x+50}$

13. THINK ABOUT IT. Steve was so bummed about the results of the Michigan vs. Michigan State game that he missed school on Monday. While he was healing emotionally, you learned how to simplify algebraic expressions. Kylie shared an example problem with Steve, but she made an error. Looking at her work below, state a claim about Kylie's error, use evidence to back up your claim, and support your answer with mathematical reasoning.

$$4(5x-2)+3x-15$$
$$20x-2+3x-15$$
$$23x-17$$

When Kylie was using the Distributive Property in her first step, she forgot to multiply the 4 by -2 also. Her second step should have been $20x-8+3x-15$ instead of $20x-2+3x-15$. Since her second step was incorrect, her final answer was also incorrect. Once she combined the correct like terms, her final answer should have been $23x-23$.