NTID

Mrs. Lafferty

7th Grade

Day 11

Evaluating Algebraic Expressions

➤ **Check each answer to see whether the student evaluated the expression correctly. If the answer is incorrect, cross out the answer and write the correct answer.**

Algebraic Expressions	Student Answers	
1 $5m + 26$ when $m = 3$	~~$5(3) + 26 = 15 + 26$ $= 31$~~	Possible answer: $5(3) + 26 = 15 + 26$ $= 41$
2 $8(x + 2)$ when $x = 6$	$8(6 + 2) = 48 + 2$ $= 50$	
3 $7p + 5$ when $p = 12$	$7(12) + 5 = 7(17)$ $= 119$	
4 $q + 9p$ when $q = 18$ and $p = 4$	$18 + 9(4) = 18 + 36$ $= 54$	
5 $6w - 19 + k$ when $w = 8$ and $k = 2$	$6(2) - 19 + 8 = 12 - 19 + 8$ $= 1$	
6 $12x + y$ when $x = 3$ and $y = 52$	$12(3) + 52 = 36 + 52$ $= 88$	

7 Check your answer to problem 2 by using a different strategy.

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Day 12

Using Order of Operations with Expressions with Exponents

➤ **Simplify or evaluate each exponential expression using the order of operations. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.**

1. $(6 + 3)^4$ _____
2. $6 + 3^4$ _____
3. $2(4^3) - 1$ _____
4. $2(4^3 - 1)$ _____
5. $5 + 9(1 + 2)^2$ _____
6. $5 + 9(1) + 2^2$ _____
7. $(18 - 4)^2$ _____
8. $18 - 4^2$ _____
9. $9 + 2(3^2)$ _____
10. $(9 + 2)3^2$ _____
11. $12 + x^4 - 6$ when $x = 8$ _____
12. $m^3 + 9n$ when $m = 4$ and $n = 5$ _____

Answers

27	196	2	18	126	99
127	86	109	4,102	87	6,561

Day 13

Identifying Equivalent Expressions

➤ **Determine whether each pair of expressions is equivalent. Show your work.**

1. $2(x - y)$ and $2x - 2y$

2. $4(x + y)$ and $4y + 4x$

3. $4p + 3c$ and $(c + 2p)(2)$

4. $21q - 7p$ and $(3q - p)(7)$

5. $4(2a - 3v)$ and $8a + 6v$

6. $8(3x + c) - 1$ and $8c + 24x - 1$

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Day 13

Identifying Equivalent Expressions *continued*

7 $3(2x + 11)$ and $(3x + 15)(2)$

8 $2x + 2x + 2c + 6$ and $(2x + c + 3)(2)$

9 $3e + 7 - e$ and $2e + 10 + 2e - 3$

10 $5c + 4c + 2$ and $5c + 2(2c + 1)$

11 How can you check your answer to problem 8 by choosing values for the variables?

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Day 14

Writing and Solving One-Variable Equations

➤ **Solve each problem by writing and solving a one-variable equation.**

1. In the first three innings of a baseball game, the home team scored some runs. In the rest of the game, they scored 5 runs more than the number of runs scored in the first three innings. If the home team scored 9 runs in all, how many runs did they score during the first three innings? How many runs did they score in the remainder of the game? Let x = the runs scored in the first three innings.

2. The punch bowl at Felicia's party is getting low, so she adds 12 cups of punch to the bowl. Two guests serve themselves 1.25 cups and 2 cups of punch. The punch bowl now contains 11.5 cups of punch. How many cups were in the punch bowl before Felicia refilled it? Let n = number of cups in bowl before Felicia refilled it.

3. Vanessa is a caterer. She made several batches of appetizers last weekend for an event. This weekend, Vanessa made 4 times as many batches. She made a total of 25 batches of appetizers for the two weekends. Determine the number of batches Vanessa made last weekend and the number of batches she made this weekend. Let b = the number of batches of appetizers Vanessa made last weekend.

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Day 14

Writing and Solving One-Variable Equations *continued*

4. Wanda earned $350 babysitting over the months of July and August. She earned $90 more in August than in July. How much did she earn babysitting in July? In August?

5. Charlene is 8 years older than Aaron. The sum of their ages is 44. What are their ages?

6. On Saturday, 45% of the music Brianna listened to was country songs. She listened to 27 country songs on Saturday. How many songs did Brianna listen to on Saturday?

Day 15

Writing and Graphing One-Variable Inequalities

➤ **Write an inequality to represent each situation.**

1. A farmer weighs a dozen chicken eggs. The heaviest egg is 56 g.

_____

2. A light bulb is programmed to turn on when the temperature in a terrarium is 72°F or cooler.

_____

3. Martin is building a sandcastle at the beach. He pours no less than 5 cups of wet sand into each plastic mold.

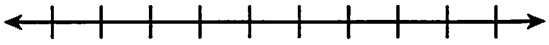
_____

4. The shortest tree in a park is at least 25.5 ft tall.

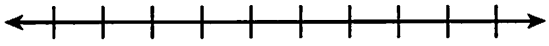
_____

➤ **Graph each inequality.**

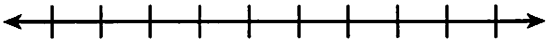
5. $n \geq -2$



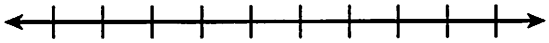
6. $h \leq 5$



7. $t \leq 7.1$



8. $r \geq -\frac{2}{3}$



9. What is the difference between the inequality $x \leq 5$ and the equation $x = 5$?