

ARRANGED HOUR FOR MATH 50

Math 50 – Section 8.1 Simplifying Expressions

Name _____

Instructor _____

Date _____

- Use the commutative and associative laws to simplify the expression.
 - $4 + (2x + 3)$
 - $(5x)3$

- Use the distributive law to simplify the expression.
 - $\frac{2}{3}(15 - 6x)$
 - $-(7x - 8y + 1)$

- Simplify.
 - $5a - (6a - c) + 2c$
 - $-2(6x - 3y) + 3(5x + 7y)$

- Simplify.
 - $4u - \frac{2}{3}(6u - 3)$
 - $-2.9(1.1x + 3.5) - 4.6$

- Let x be a number. Translate the English phrase into a mathematical expression, then simplify the expression.
 - The number minus the product of 4 and the number

 - The number, plus 3 times the sum of the number and 1.

 - Twice the difference of 8 and the number.

 - Twice the number, minus 5 times the difference of the number and 7.

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6. A student works 8 hours on Monday, 5 hours on Tuesday, and 9 hours on Wednesday. The student earns \$12 per hour. Show two ways to compute the student's total earnings. Use the distributive law to explain why both methods give the same result. Write your response in a full sentence.

7. A student takes four in-class exams and gets the following scores out of 100 points: 74, 86, 80, and 92. Each exam is worth 25% of the student's final grade. Show two ways to compute the student's final grade. Use the distributive law to explain why both methods give the same result. Write your response in a full sentence.

8. A ride on a Bird™ scooter costs \$1 initially plus an additional \$0.15 per minute. Suppose that someone rode a Bird™ scooter from SMC to Santa Monica Beach and returned back on a different Bird™ scooter. Assume the time to complete each direction of the trip was different.
 - a. Find an expression that models the total cost of the trip by adding the costs of each scooter ride (using x and y to represent the time traveled on each scooter.). Simplify your expression.

 - b. Suppose instead of stopping and getting a different scooter at the beach, you immediately turned around and headed back to SMC on the same scooter. Find an expression that models the total cost of the trip.

 - c. Suppose in part (c) the return leg of the trip took the same amount of time as the initial leg. Find an expression that models the total cost of the trip. Simplify your expression.