

Homework 1 June 14, 2016

1. Use the distributive property to rewrite the following expression without parenthesis: $5\left(\frac{1}{10}x - \frac{2}{15}\right)$.

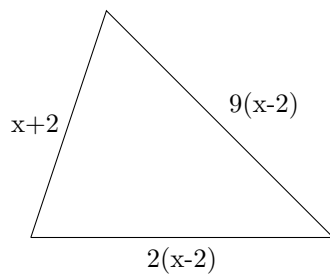
2. Simplify the following expressions by combining like terms. If this is not possible write "already simplified."

a. $2a^2 + 3a - 6a^2 + 5$

b. $8 - 4t + 6t^2$

c. $12 - 10m + m - 3$

3. Write an expression for the perimeter of the figure below. Then simplify the expression.



4. Consider the expression $6(-x - 3) - x(9 + x)$.

a. Evaluate the expression above when $x = 4$.

b. Instead of evaluating, simplify the expression above.

c. Evaluate your expression in part b. for $x = 4$.

d. In your experience, was it easier to evaluate the expression for $x = 4$ before or after simplifying? Explain.

5. You have \$58 and you want to buy a pair of jeans and a \$20 t-shirt. There is a 6% sales tax. Let x represent the cost of the jeans. The following inequality models how much you can spend on the jeans.

$$x + 20 + 0.06(x + 20) \leq 58$$

a. Simplify the left side of the inequality.

b. If the jeans cost \$35, can you buy both the t-shirt and the jeans? Explain your answer.