

**Simplifying Linear Expressions - Guided Lesson Explanation****Explanation#1**

We have to find an equivalent equation. If we work the equation out, we will generate an equal expression:

$$\begin{aligned} &= 5(x + 7) - 4 \text{ (parenthesis)} \\ &= 5x + 35 - 4 \text{ (combine like terms)} \\ &= 5x + 31 \end{aligned}$$

**Explanation#2**

Step 1) This looks very hard at first. We need to remember that in an equilateral triangle all three sides are equal. So it stands to reason that if we divide the perimeter by 3, we can determine the length of one side.

Step 2) Take 3 as common factor in  $(18x + 3)$ . The result will be  $3(6x + 1)$

$3(6x + 1)$  is the perimeter of equilateral triangle whose all three sides are equal.

Step 3) So divide  $3(6x + 1)$  by 3

The length of each of the three sides is  $(6x + 1)$ .

**Explanation#3**

Step 1) We will write each expression in its simplest form.

Step 2) Distribute and combine like terms in the first expression to get

$$\begin{aligned} 2(3a - 2) + 4a &= 6a - 4 + 4a \text{ (combine like terms)} \\ &= 10a - 4 \text{ (take 2 as common factor)} \\ &= 2(5a - 2) \end{aligned}$$

The second expression is:  $2(5a - 2)$ .

The first expression is equivalent to the second expression. Yes, Suzanne is correct.

