

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**AIM: How can we solve word problems involving simplifying equations?**

$6n + 10 - n - 20 = 65$ <b>check</b>	$2(4x + 17) - 10 = -32$ <b>check</b>
$3(x - 2) - (x - 3) = -25$ <b>Check</b>	

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1.) When given an equation, such as  $2(x + 5) + x = 20$ , what is the first step?

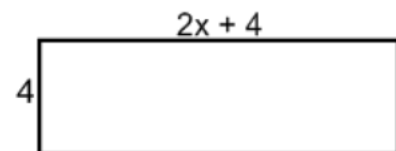
2.) Simplify the equation and rewrite it. (Don't solve).

3.) True/False: To simplify  $-2(x - 5)$ , we would distribute and get  $-2x - 10$ .

**Application**

**4.) The perimeter of the following rectangle is 36 units. Find x.**

a.) Equation



b.) Solve

c.) Find x.

**Application**

5.) a.) **What are consecutive integers?**

b.) **What are the next 2 consecutive integers after 5?**

c.) **What are the next 2 consecutive integers after -9?**

d.) **What are the next 2 consecutive integers after -1?**

e.) **What are the next two consecutive integers after  $x$ ?**

6.) **Find two consecutive integers whose sum is 29.**

1. *Define variables.*

2. *Write an equation*

3. *Solve.*

4. *Write a sentence to answer the question.*

7.) **Find three consecutive integers whose sum is 63.**

8.) **Find three consecutive integers whose sum is -123.**

9.) Find two consecutive integers such that twice the second increased by the first is equal to 62.

10.) Find two consecutive integers such that the first increased by 3 times the second is equal to 103.



If  $x$  is the first consecutive integer, then the next two consecutive integers can be defined as:

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