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

**CFS for top quality work**

* + Equation is **simplified** by combining like-terms
  + **Inverse operations** are used on both sides of the equation
  + Solution is in the form **x = #**
  + **Substitution** is used to check the solution

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

UNIT 4 LESSON 6

**AIM**: SWBAT solve complex equations requiring simplification

In my own words this means I will be able to …

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**THINK ABOUT IT!**

Determine the value of n

Test the Conjecture #1) Determine the solution

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Test the Conjecture #2) Determine the value of n if the perimeter of the triangle is 40cm

**CFS for top quality work**

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**2n + 3.5**

**2n + 1.5**

**n**

Conjecture

|  |
| --- |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ like-terms in an equation creates an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ equation |

**PARTNER PRACTICE** Group Leader: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| *Bachelor Level* |

1. Solve for **m** in the equation .

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  + **Substitution** is used to check the solution

1. Find the value of **v** in the equation Show all steps, including a formal check.

**CFS for top quality work**

* + Equation is **simplified** by combining like-terms
  + **Inverse operations** are used on both sides of the equation
  + Solution is in the form **x = #**
  + **Substitution** is used to check the solution

My group came up with the following question related to today’s objective:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| *Master Level* |

1. The perimeter of the rectangle below is 28 units.

1.5n

2n + 3.5

2n + 3.5

1.5n

Read and evaluate each statement below. Decide whether it is “true” or “false.”

|  |  |  |
| --- | --- | --- |
| Statement | True | False |
| The perimeter of the rectangle can be represented as 3.5n + 3.5 |  |  |
| The perimeter of the rectangle can be represented as 7n + 7 |  |  |
| The length is 3 units |  |  |
| The width is 9.5 units |  |  |

**INDEPENDENT PRACTICE**

|  |
| --- |
| *Bachelor Level* |

1. Solve for **the variable** and perform a formal check with the original equation.

**CFS for top quality work**

* + Equation is **simplified** by combining like-terms
  + **Inverse operations** are used on both sides of the equation
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4n – 10 – 8n + 3 = 11

1. Solve for **k** in the equation .

**CFS for top quality work**

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1. Solve for **d** in the equation .

**CFS for top quality work**

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|  |
| --- |
| *Master Level* |

1. The perimeter of a triangle is 50 inches. The two longer sides are equivalent and measure 1.5n + 3. The shorter side measures 0.5n + 1.5. What are the side lengths of the triangle? Sketch a drawing of the figure labeling the correct side lengths.
2. Error Analysis: Two Students solved the equation below. Check both answers to determine which, if either, is correct. Then find the mistakes the scholar(s) made.

|  |  |
| --- | --- |
| Scholar 1 – Amanda | Scholar 2 – Janine |
|  | + |

Which scholar is correct, if either? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

What error(s) was/were made?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| *PhD Level* |

1. Determine the length of the each side of the rectangle below given the area.

Area = 532 Square Inches

19

3n + 13

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**EXIT TICKET**

|  |  |  |  |
| --- | --- | --- | --- |
| Self-assessment | I mastered the learning objective today. | I am almost there. | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there. | You need more practice and feedback. |

I rated myself this way because…

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Solve for **g** in the equation Show all steps, including the formal check.

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1. The length of a rectangle is **a + 3.** The width of the rectangle is **2a + 11**. If the **perimeter** is 46 inches, what’s the **value of a**?

**CFS for top quality work**

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  + **Substitution** is used to check the solution