

7TH GRADE 2019 SUMMER VACATION MATHEMATICS PACKET

Due September 5, 2019

Directions:

Answer all questions. Show work in the box. Return packet to your math teacher in September.

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[Email address]

Name: _____ Class: _____

What: Solve one step equations (addition and subtraction only)**How:** Using inverse operation

When solving a one-step equation, we must **isolate the variable** on one side of the equation. For this purpose, we will **perform the inverse** of whatever operation is being done to the variable on **both sides** of the equation.

Example 1:

$$\begin{array}{r} y + 51 = 93 \\ - 51 = - 51 \\ \hline \end{array}$$

$$y = 42$$

The **variable** in this equation is **y**. The operation is **addition**. The **inverse operation** is **subtraction**. To isolate **y** on the left side of the equation, we have to subtract 51 on both sides of the equation. The **solution** is 42.

Example 2:

$$\begin{array}{r} x - 33 = 147 \\ + 33 = + 33 \\ \hline \end{array}$$

$$x = 180$$

The **variable** in this equation is **x**. The operation is **subtraction**. The inverse operation is **addition**. To isolate **x** on the left side of the equation, we have to add 33 on both sides of the equation. The **solution** is 180.

What if you have a fraction and a whole number?

Example 3:

$$\frac{v}{6} = \frac{4}{1}$$

Solve

Step 1: Re-write the whole number as a fraction.

$$\frac{v}{6} = \frac{4}{1}$$

Step 2: Cross-multiply.

$$\frac{v}{6} = \frac{4}{1}$$

$$(v)(1) = (6)(4)$$

$$v = 24$$

7th Grade Summer 2019 Vacation Packet

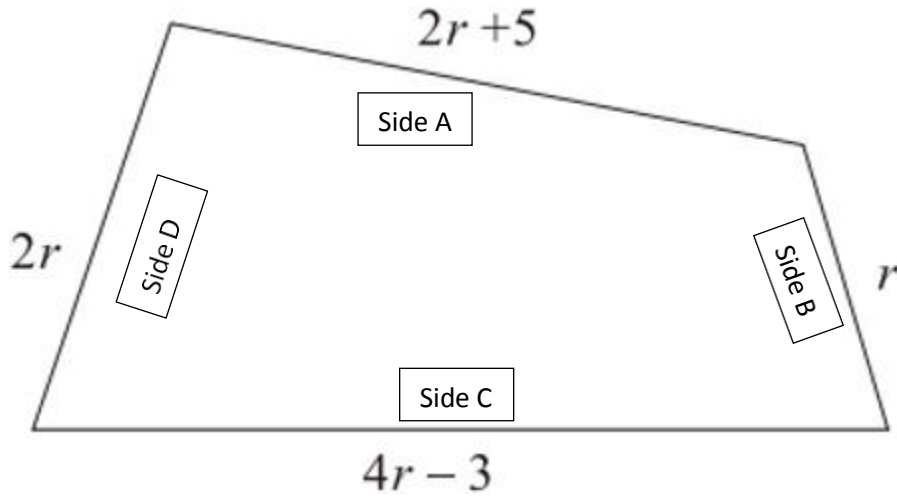
Name: _____ Class: _____ Date: _____

Part I:

Solve the equations.

1 a. $11v = 8$	1 b. $v + 8 = 4$
2 a. $w - 6 = 2$	2 b. $8n = 4$
3 a. $a + 12 = 8$	3 b. $\frac{y}{2} = 2$
4 a. $\frac{p}{11} = 7$	4 b. $p - 8 = 8$
5 a. $3y = 11$	5 b. $\frac{z}{5} = 2$

Part II:



1. What is the difference between Side A and Side B? (Hint: one side from the other)

2. What is the difference between Side B and Side D? (Hint: one side from the other)

3. Find the perimeter of the rectangle shown above.