**Math 9 Journal Entries**

**Learning Guide 12**

**Expectation 1: Demonstrate an understanding of similarity of triangle**

What two conditions must be true if a pair of triangles are similar?

1.

2.

The two triangles below are similar, explain how you would calculate the unknown side.

12cm

12cm

*x* cm

A’

B’

C’

B

C

A

8cm

8cm

7cm

Consider the following examples in the review of the use of the **Pythagorem Theorem** from last year.

Recall that, in a right-angle triangle, the formula is the relationship between the two *legs* of the triangle (“a” and “b) and the hypotenuse (“c”). Recall that the hypotenuse is opposite the right angle. This formula is called the **Pythagorean Theorem.**

An example of computing a missing side is as follows:

8cm

6cm

x

The length of the hypotenuse, then, is 10cm.

The following pair of triangles are similar. Using the Pythagorean Theorem and the properties of similar triangles, calculate the missing sides in the diagram.

36cm

x

y

12cm

5cm

**Expectation 2: Demonstrate an understanding of similarity of polygons.**

What two conditions must be true if a pair of polygons are similar?

1.

2.

The two polygons below are similar; explain how you would calculate the unknown side.

*x* cm

7.2 cm

7.2 cm

4.2 cm

12cm

12cm

10cm

7 cm