**Similar Figures Worksheet Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_**

**Fill in the blank with the appropriate word, phrase, or symbol to make a true statement.**

1. Similar figures have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but not necessarily the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. The symbol \_\_\_\_\_\_\_\_\_\_\_\_\_ means "is similar to" and the symbol \_\_\_\_\_\_\_\_\_\_\_\_ is the abbreviation for the word

 angle.

3. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ drawing is an enlarged or reduced drawing that is similar to an actual object or

 place.

4. In similar triangles, corresponding \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are congruent and corresponding \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are in

 proportion.

5. To find a missing side length set up and solve a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Put the measurements of the smaller figure on top and the bigger figure on the bottom.

**Learning Goal # 1: I can identify the corresponding parts of similar figures.**

 **Example: The figures in each pair are similar (ΔABC ~ ΔXYZ).**

*X*

 ∠A corresponds with ∠\_\_\_\_. AB matches with \_\_\_\_\_\_.

*30*°

*Y*

*C*

*B*

*A*

 ∠B matches with ∠\_\_\_\_. BA corresponds with \_\_\_\_\_\_.

*Z*

*D*

 ∠C corresponds with ∠\_\_\_\_. BC matches with \_\_\_\_\_\_.

Practice Problems

1. **ΔSIT ~ ΔDOG**

First, label ∠D, ∠O, & ∠G on the small triangle. Then, fill in the blanks below:

*O*

*T*

*I*

*S*

*G*

 ∠D corresponds with ∠\_\_\_\_. DO matches with \_\_\_\_\_\_.

 ∠O matches with ∠\_\_\_\_. IT corresponds with \_\_\_\_\_\_.

 ∠G corresponds with ∠\_\_\_\_. ST matches with \_\_\_\_\_\_.

Suppose ∠S = 25°, what is the measure of ∠D? \_\_\_\_\_\_\_\_\_.

1. **ΔHOT ~ ΔPIG**

 ∠H corresponds with ∠\_\_\_\_. PI matches with \_\_\_\_\_\_.

*H*

*T*

*O*

*P*

*I*

*G*

 ∠O matches with ∠\_\_\_\_. IG corresponds with \_\_\_\_\_\_.

 ∠T corresponds with ∠\_\_\_\_. GP matches with \_\_\_\_\_\_.

**Learning Goal # 2: I can find the missing measurements of two similar figures.**

 **Example 1:** The figures in each pair are similar **Example 2:** The figures in each pair are similar

 (ΔABC ~ ΔXYZ).

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$$\frac{4}{8}=\frac{3}{?}$$

$$\frac{3}{5}=\frac{x}{2.5}$$

 small Δ small

 big Δ big

 The missing side is \_\_\_\_\_\_\_\_\_\_\_ .  *x* =

Practice Problems

 Find the missing side(s) in each similar figure. ***Show Work!***



1. 2.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. 4.

 12

12 cm

w

4

x

 3

y

{

16 cm

 6

4 cm

 x = \_\_\_\_\_\_\_\_ y = \_\_\_\_\_\_\_\_ w = \_\_\_\_\_\_\_\_

 5. 6.

6 cm

3.8

j

k

6

4

10

4 cm

7 cm

{

b

 5. j = \_\_\_\_\_\_\_\_ k = \_\_\_\_\_\_\_\_ b = \_\_\_\_\_\_\_\_