Similar Figures Worksheet

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).

Practice Problems

1. ΔSIT ~ ΔDOG

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

∠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? _______.

2. ΔHOT ~ ΔPIG

∠H corresponds with ∠_____. PI matches with _______.
∠O matches with ∠_____. IG corresponds with _______.
∠T corresponds with ∠_____. GP matches with _______.

Name: ___________________________ Hour: ___
Learning Goal #2: I can find the missing measurements of two similar figures.

Example 1: The figures in each pair are similar (ΔABC ~ ΔXYZ).

\[
\frac{\text{small } \triangle}{\text{big } \triangle} = \frac{3}{5} = \frac{x}{2.5}
\]

The missing side is \(x\).

Example 2: The figures in each pair are similar

\[
\frac{\text{small } \square}{\text{big } \square} = \frac{2.5}{3}
\]

\(X = \) ________

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

1.

\[
\frac{10}{7} = \frac{x}{6}
\]

1. \(x = \) ________

2.

\[
\frac{3.9}{4.1} = \frac{x}{4.2}
\]

2. \(x = \) ________

3.

\[
\frac{4}{6} = \frac{x}{12}
\]

3. \(x = \) ________

4.

\[
\frac{16}{4} = \frac{w}{12}
\]

4. \(w = \) ________

5.

\[
\frac{4}{6} = \frac{j}{3.8}
\]

5. \(j = \) ________

6.

\[
\frac{6}{4} = \frac{k}{10}
\]

6. \(k = \) ________

5.

\[
\frac{6}{4} = \frac{6 \text{ cm}}{b}
\]

6. \(b = \) ________