Identifying Similar Figures and Solving For Missing Measurements

Recall for polygons to be similar they must meet the following criteria:

1. Corresponding angles are congruent
2. Corresponding sides are proportional

Also recall that you know a similarity shortcut for triangles. Complete the following sentence.

If two angles of one triangle are congruent to two angles of another triangle, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 1.  8  8  10  10 | 2.  **Q**  **8**  **6**  **5**  **D**  **S**  **R**  **12**  **B**  **A**  **P**  **C** |
| 3.  70  65  30  30 | 4.  **Q**  **3**  **1.5**  **D**  **S**  **R**  **7.5**  **B**  **A**  **P**  **C**  **15** |
| 5. | 5. Ann’s rectangular room is 10 ft by 12 ft 6 in. She draws a rectangular sketch of her room 8 in by 10 in. Is Ann’s sketch similar to her actual room? |

Use what you know about similar figures to identify which figures below are similar.

Knowing the following figures are similar use proportional reasoning to find the missing measurement.

Example: Rectangles ABCD and PQRS are similar. Find x.

**8**

**Q**

##### 

**P**

**6**

**x**

**D**

**S**

**R**

**12**

**B**

**A**

**C**

The following figures are similar. Solve for the designated side.

**6**

**q**

**4**

**5**

**5**

**8**

**3**

**y**

2.

**1.**

Each figure shows a pair of similar triangles. Find each unknown length.

**4.**

**3.**

35 35 10.2

m

3.4

x

1.6

y

21

3

n

p

48

Centimeter graph paper