**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**(3.6B) Similar Figures**

**1. In the diagram below ABC is**

**similar to DEC. If DE = 8, CD = 12, and DA = 3. What is the length of AB?**

 **C**

 **12**

 **D E**

 **3 8**

 **A B**

**2. In the diagram below ABC is**

**similar to DEC. If AB = 8,**

**AC = 10, and DC = 25, find DE.**

 **D**

 **25**

 **B**

 **C E**

 **8 10**

 **A**

**3. In the diagram below ESF is**

**similar to RST. If SE = 8, ER = 6 and FT = 15, find SF.**

 **S**

 **E F**

 **R**

**4. The figures below are similar.**

 **Find the perimeter of quadrilateral**

 **EFGH.**

 **A 2 B 6 F**

 **E**

 **5 3**

 **C 7 D**

 **G H**

**5. In the diagram below ABC is**

**similar to DEC. If AC = 8,**

**DC = 12, and CE = 9, find BC.**

 **E**

 **A C D**

 **B**

**6. RST is similar to VUT.**

 **R S**

 **7.2 mm**

 **T**

 **30 mm 18 mm**

 **U V**

 **24 mm**

**What is the length of RS?**

1. **3.3 millimeters**
2. **9.6 millimeters**
3. **9.0 millimeters**
4. **5.8 millimeters**

**7. Kate has 2 similar triangular pieces**

 **of paper, as shown below.**

 **18.0 cm 11.0 cm**

 **12.0 cm p**

**Using the dimensions given, find the approximate length of the side labeled p.**

1. **2.4 centimeters**
2. **7.3 centimeters**
3. **16.5 centimeters**
4. **19.6 centimeters**

**8. The figures below represent similar**

**triangles. Using the dimensions given, find the approximate length of the side labeled x.**

 **5 in**

 **20 in 2 in**

 **x**

**9. If a tree 40 feet tall casts a shadow**

 **12 feet long, how long is the shadow**

 **cast by a man 6 feet tall?**

**10. If a tree 6 feet tall casts a shadow**

**4 feet long, how high is a flagpole that casts a shadow 18 feet long at the same time of day?**