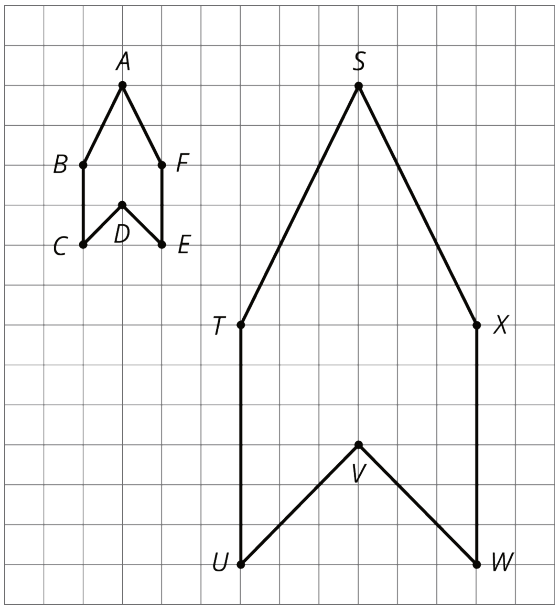
NAME DATE PERIOD

## Lesson 4 Summary

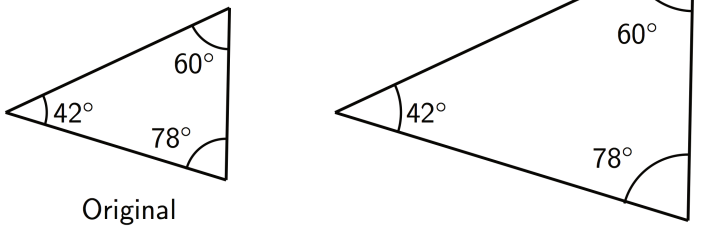
When a figure is a scaled copy of another figure, we know that:

1. All distances in the copy can be found by multiplying the *corresponding distances* in the original figure by the same scale factor, whether or not the endpoints are connected by a segment.

   For example, Polygon $STUVWX$ is a scaled copy of Polygon $ABCDEF$. The scale factor is 3. The distance from $T$ to $X$ is 6, which is three times the distance from $B$ to $F$.




2. All angles in the copy have the same measure as the corresponding angles in the original figure, as in these triangles.




Original

These observations can help explain why one figure is *not* a scaled copy of another.

For example, even though their corresponding angles have the same measure, the second rectangle is not a scaled copy of the first rectangle, because different pairs of corresponding lengths have different scale factors, $2 \cdot \frac{1}{2} = 1$ but $3 \cdot \frac{2}{3} = 2$.