Similar Polygons

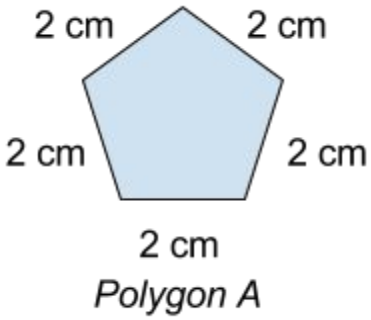
Similar polygons have these properties:

1) Corresponding angles are equal.
2) Corresponding sides are proportional.

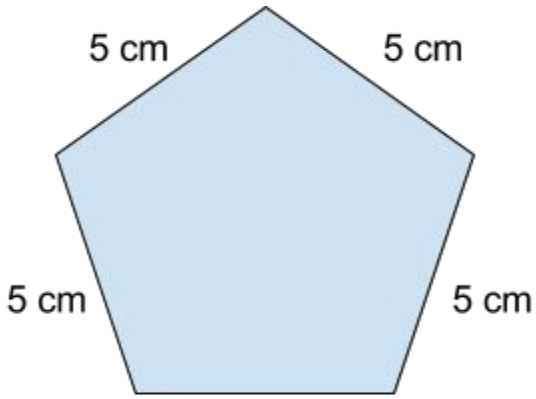
The size of polygons can be different, but if the sides are proportional in length, then the angles are equal.

If both these conditions are met, the polygons are classified as similar.

Example



Polygon A



Polygon B

Stacey draws polygon B, which is a reduction of polygon A by a scale factor of 2.5.

Explain why polygon A and B are similar.

Solution

The properties of similar polygons states two polygons are similar when the corresponding angles are equal and the corresponding sides are proportional.

The length of each side of polygon A is 2.5 times the length of each of corresponding side of polygon B. This confirms that both polygons are similar because the corresponding sides are proportional.

Since the corresponding sides are proportional, the corresponding angles are equal as well.