

Name \_\_\_\_\_

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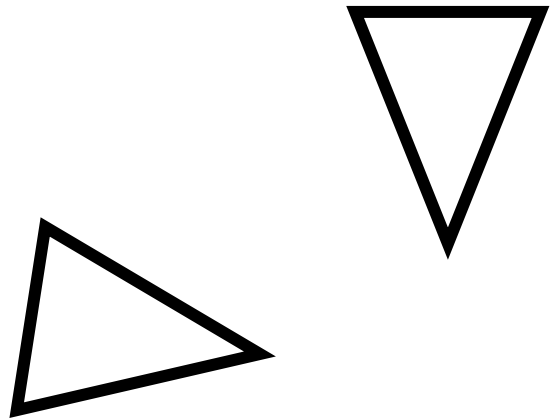
## Similar Polygons: Ratio of Perimeters & Areas - Step-by-Step Lesson

Two  $\Delta$  are similar.

The sides of the first  $\Delta$  are 3, 4, and 5.

The largest side of the second  $\Delta$  is 30.

Find the perimeter of the second  $\Delta$ .



### Explanation:

Perimeter of similar triangles

$$\frac{\text{Perimeter of } \Delta \text{ first}}{\text{Perimeter of } \Delta \text{ second}} = \frac{\text{largest side } \Delta \text{ first}}{\text{largest side } \Delta \text{ second}}$$

$$\text{Perimeter of } \Delta \text{ first} = 3+4+5=12$$

$$12 / \text{Perimeter of } \Delta \text{ second} = 5 / 30$$

$$12 / \text{Perimeter of } \Delta \text{ second} = 1 / 6$$

$$\text{Perimeter of } \Delta \text{ second} = 12 \times 6 \quad (\text{Cross-Products property})$$

$$\text{Perimeter of } \Delta \text{ second} = 72$$

Answer is: 72

