Chapter 9
Math 7
Class Notes

Perimeters of Irregular Polygons

Vocabulary

Irregular Polygon

- A polygon that is not uniform in shape or size

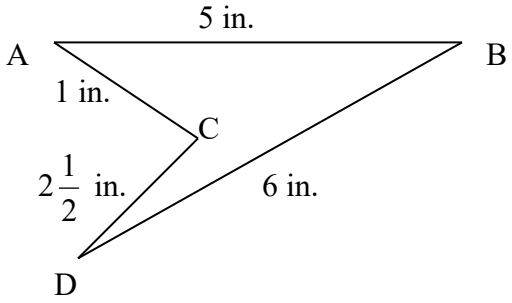
***** IMPORTANT*****

A line segment is identified by its endpoints with a line drawn over the letters: $\overline{AB}$

EXAMPLES

Make sure to show the formula used and each step to receive full credit.
Label, label, label

1. Find the perimeter of polygon ABCD



$P = \overline{AB} + \overline{BD} + \overline{DC} + \overline{CA}$

$P = 5 \text{ in} + 6 \text{ in} + 2\frac{1}{2} \text{ in} + 1$

$P = 14\frac{1}{2} \text{ inches}$

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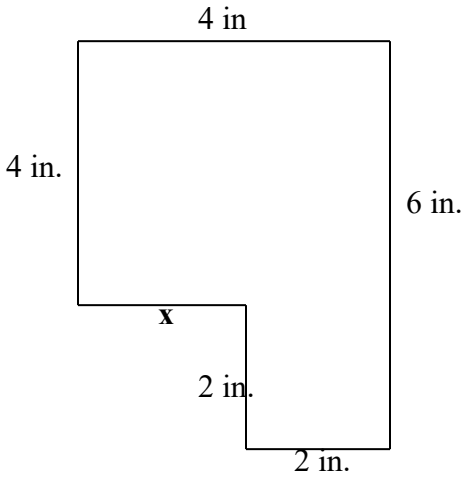
2. Find each missing measure **x**, then find the perimeter of the polygon

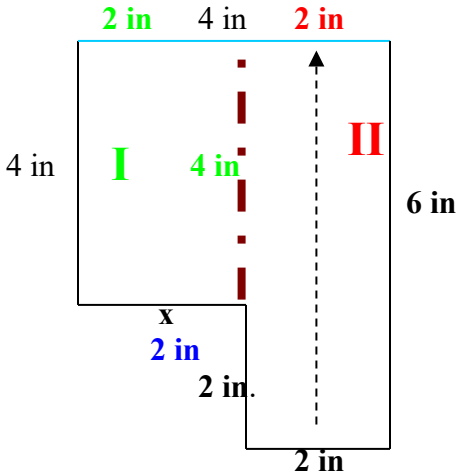
Original Picture



To find a missing side, you must section the original picture into recognizable polygons – like squares, rectangles, etc.

Rectangles – **opposite sides are equal**

The dotted line was put in to help solve the problem.



Rectangle II: - The shorter side is 2 in, since opposite sides are equal, the opposite side is 2 in.

- The longer side is 6 in. – the opposite side is made up of the original 2inches and the dotted line. To figure out the length of the dotted line, take the 6 inches and subtract the original 2 inches an get 4 inches.

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Rectangle I: - The two longer sides of this rectangle is 4 inches.
Looking back Rectangle II, when the dotted line was put into place, it split the original line into two pieces – one we found to be 2 inches. This makes the other half of the line 2 inches.
Since opposite sides of a rectangle are equal
x = 2 inches

Back to the original problem:
Find each missing measure **x**, then find the perimeter of the polygon

We found: x = 2 inches

P = 4 in + 4 in + 6 in + 2 in + 2 in + 2 in
= 20 in.

Textbook pages: 246-247