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# **Measure Side Lengths to Determine the Perimeter of Polygons**

Unit 7 Lesson 4

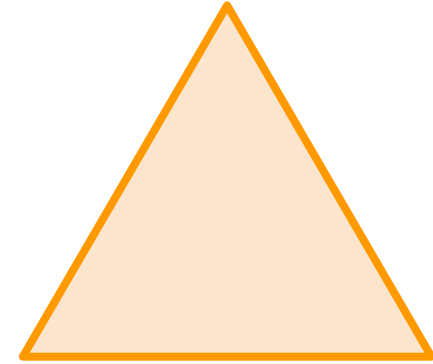
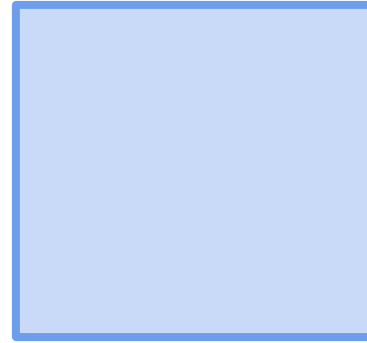
Now that we are familiar  
with classifying polygons let's  
learn about finding their  
perimeters!



# Types of Polygons

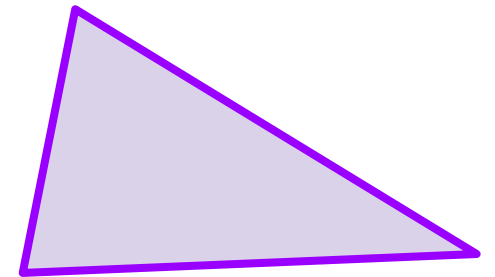
## Regular Polygons

A polygon with equal sides and interior angles is known as a regular polygon—examples: equilateral triangle, square.



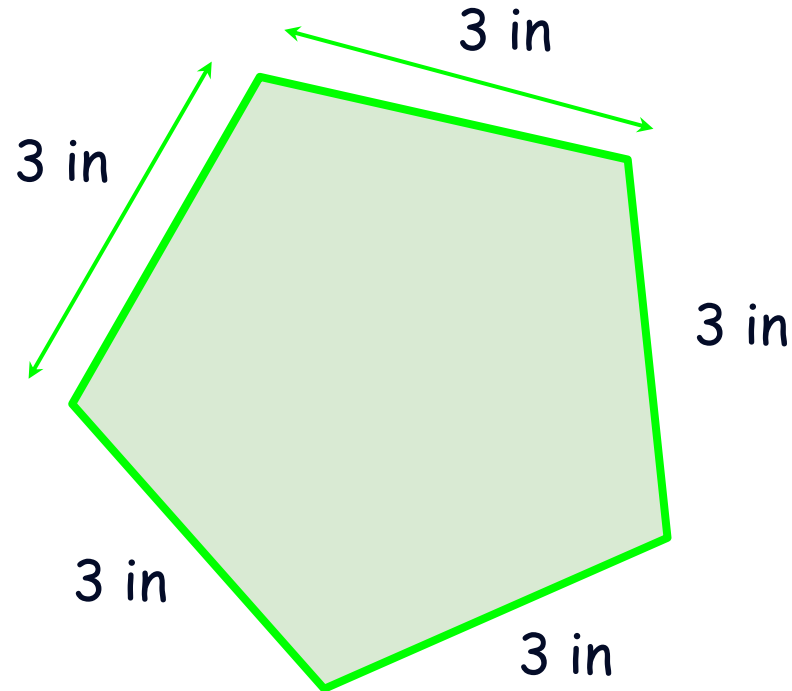
## Area

A polygon that is neither equilateral nor equiangular is known as an irregular polygon—examples: rectangle, scalene triangle.



# Perimeter Formula

Perimeter = Sum of all sides



$$\text{Perimeter} = 3 + 3 + 3 + 3 + 3 = 15 \text{ in}$$

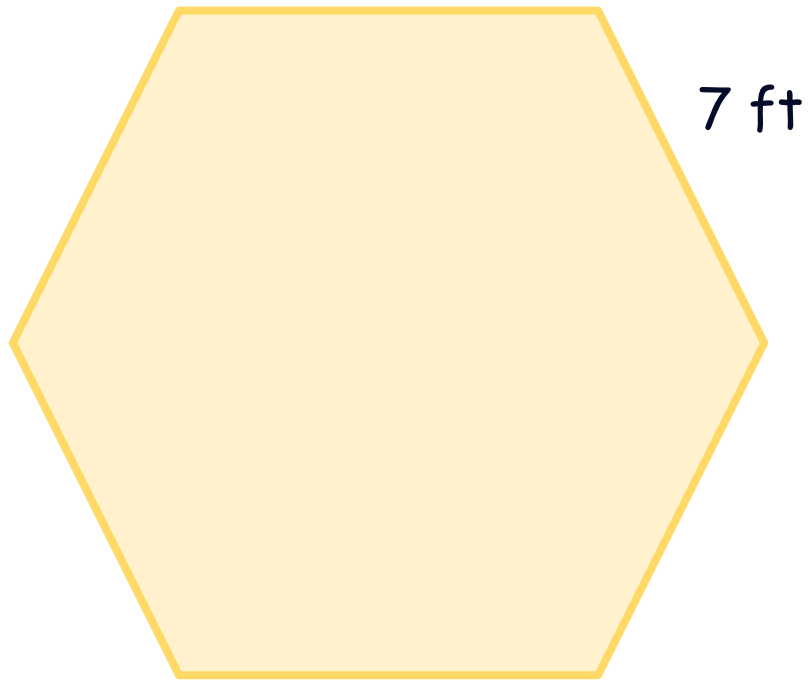
Note:

## Perimeter of Regular Polygons

In regular polygons, the length of each side is the same. To find the Perimeter, we simply multiply the side length by the number of sides (e.g. Pentagon with a side length of 3 will be Perimeter =  $3 \times 5 = 15$ )

# Finding the Perimeter

If one side length of the given polygon is 7 feet long, what is the perimeter of the polygon?



Length of one side = 7 feet long

Number of sides = 6 (hexagon)

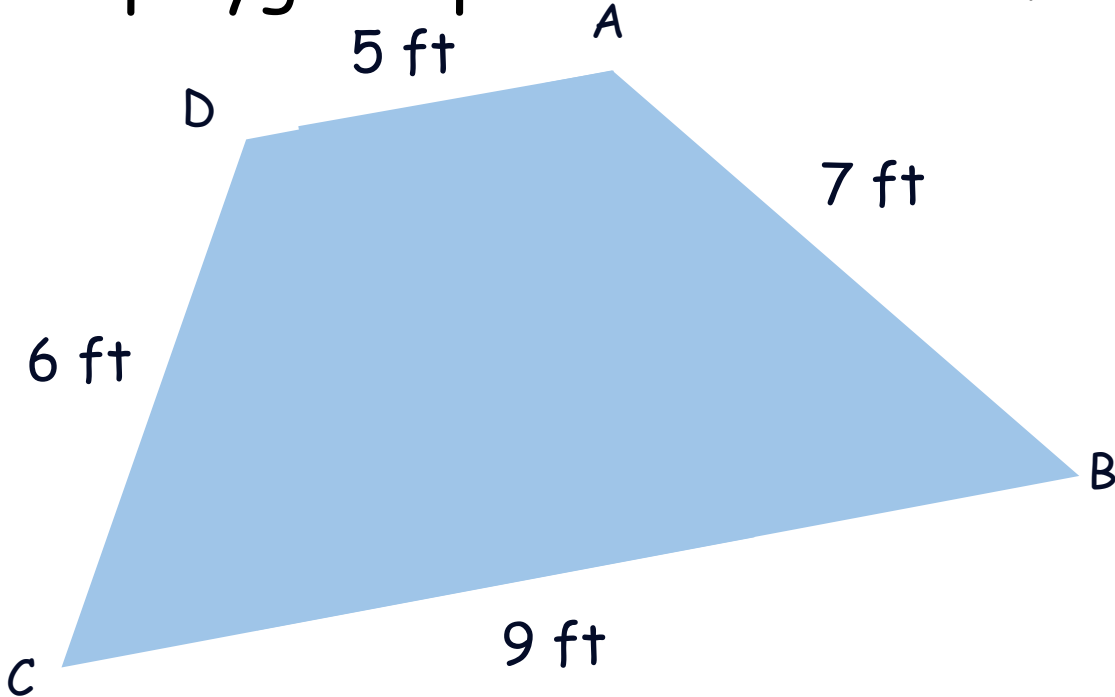
Perimeter = (number of sides)  $\times$  (length of one side)

Perimeter =  $6 \times (7 \text{ feet})$

Perimeter = 42 feet

# Finding the Perimeter

Find the measurement of the missing side length if the polygon's perimeter is 27 feet



$$AB = 7 \text{ feet long}$$

$$BC = 9 \text{ feet long}$$

$$CD = ? \text{ 6 feet long}$$

$$DA = 5 \text{ feet long}$$

$$\text{Perimeter} = 7 + 9 + x + 5 = 27 \text{ feet}$$

*We can also label each edge for irregular polygons when finding their perimeter*