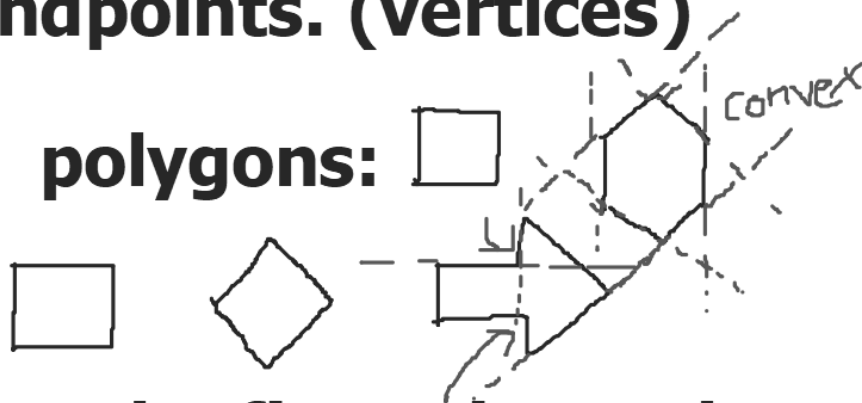


**Unit 7 L1: Polygons**  
(Section 1.6)

**OB: Identify and name Polygons**  
Find the perimeter/circumference, and area of 2 dimensional figures.

**polygon:** a closed figure made up of segments(sides)The sides intersect only at the endpoints. (vertices)



**IF the figure is a polygon - extend each side.**

**convex**: extended sides do NOT go inside polygon

**concave**: extended sides do go inside polygon

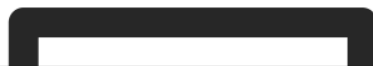
**Unit 7 L1: Polygons**  
(Section 1.6)

**OB: Identify and name Polygons**  
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dimensional figures.

**Polygons are classified by the number of sides they have:**

<b>3</b>	<b>triangle</b>
<b>4</b>	<b>quadrilateral</b>
<b>5</b>	<b>pentagon</b>
<b>6</b>	<b>hexagon</b>
<b>7</b>	<b>heptagon</b>
<b>8</b>	<b>octagon</b>
<b>9</b>	<b>nonagon</b>
<b>10</b>	<b>decagon</b>
<b>12</b>	<b>dodecagon</b>
<b>n</b>	<b>n-gon</b>

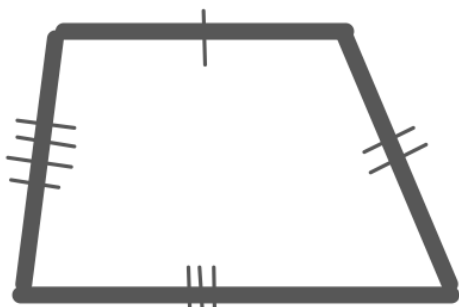
**\*\*\*\*MEMORIZE THESE**



**equilateral polygon** : all sides  $\cong$   
**equiangular polygon** : all angles  $\cong$   
**regular polygon** : all sides  $\cong$ , <sup>and</sup> all angles  $\cong$

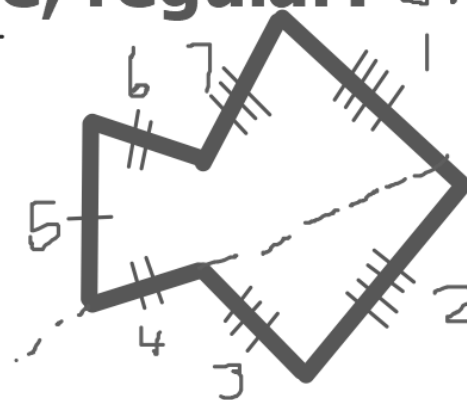
# sides  
 ↑  
**Classify, convex or concave, regular?** 3 words

1



quadrilateral (4 side)  
 convex  
 irregular

2



heptagon  
 concave  
 irregular

**Unit 7 L1: Polygons** :OB: Identify and name Polygons  
 (Section 1.6) Find the perimeter/circumference, and area of 2 dimensional figures.

**perimeter:** distance around a polygon (sum of the side lengths)

**Circumference of a Circle:** Is the distance around the circle. It is like the "perimeter."

**area of a figure:** Is the number of square units needed to cover a surface.


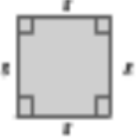
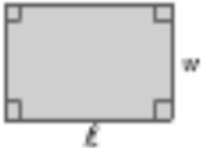

Key Concept Perimeter, Circumference, and Area			
Triangle	Square	Rectangle	Circle
			
$P = b + c + d$	$P = s + s + s + s$ $= 4s$	$P = l + w + l + w$ $= 2l + 2w$	$C = 2\pi r$ $C = \pi d$
$A = \frac{1}{2}bh$	$A = s^2$	$A = lw$	$A = \pi r^2$
$P =$ perimeter of polygon $b =$ base, $h =$ height	$A =$ area of figure $l =$ length, $w =$ width		$C =$ circumference $r =$ radius, $d =$ diameter

Chart on p.  
**58**  
of your  
book.

**Unit 7 L1: Polygons** :OB] Identify and name Polygons  
(Section 1.6) Find the perimeter/circumference, and area of 2 dimensional figures.

**Find the perimeter or circumference and the area of each figure.**



$$P = 2l + 2w$$

$$2 \cdot 4.6 + 2 \cdot 2.3$$

$$9.2 + 4.6 = \boxed{13.8 \text{ cm}}$$

$$A = lw$$

$$(4.6)(2.3) = \boxed{10.58 \text{ cm}^2}$$



$$C = 2\pi r$$

$$2 \cdot \pi (4) = \boxed{8\pi \text{ in}}$$

Exact

Round to the nearest hundredth

$$C \approx 25.13 \text{ in}$$

$$A = \pi r^2$$

$$\pi (4)^2 = \boxed{16\pi \text{ in}^2}$$

Exact

Round to nearest tenth

$$A \approx 50.3 \text{ in}^2$$

**Unit 7 L1: Polygons**  
(Section 1.6)

**OB: Identify and name Polygons**

Find the perimeter/circumference, and area of 2 dimensional figures.