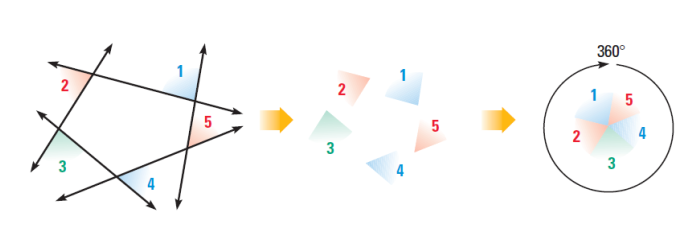
Exterior Angles – Polygons

**Sum of exterior angles of ANY polygon =\_\_\_\_\_\_\_\_\_**



1. **How many degrees are there in the sum of the exterior angles of a dodecagon?**
2. **Find the number of degrees in each exterior angle of a regular pentagon**
3. **If each exterior angle of a regular polygon contains 40how many sides does the polygon have?**
4. **What is the measure of one exterior angle of a regular decagon?**
5. **What is the sum of the exterior angles of a polygon with 36 sides?**
6. **What is the measure of each exterior angle of a stop sign?**

**Argument Writing   
Remember the steps: 1. State your claim  
 2. Show your math work  
 3. Reasoning  
 4. Counter Claim  
Are these two lines parallel when x = 50 (use proper vocabulary!!)**

3x + 4

155

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1. What is the sum, in degrees, of the measures of the interior angles of a stop sign, which is in the shape of an octagon?  
   (1) 360 (3) 1,440

(2) 1,080 (4) 1,880

1. What is the sum, in degrees, of the measures of the interior angles of a pentagon?

(1) 180 (3) 540  
 (2) 360 (4) 900

1. The measures of five of the interior angles of a hexagon are 150, 100, 80, 165, and 150. What is the measure of the sixth interior angle?  
   (1) 75 (3) 105

(2) 80 (4) 180

1. The accompanying figure represents a section of bathroom floor tiles shaped like regular hexagons



C

What is the measure of <ABC?

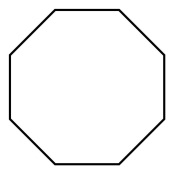
(1) 60 (3) 120  
(2) 90 (4) 150

B

A

1. What is the measure, in degrees, of each exterior angle of a regular hexagon?  
   (1) 45 (3) 120

(2) 60 (4) 135

1. A stop sign in the shape of a regular octagon is resting on a brick wall, as shown in the accompanying diagram.  
    

What is the measure of angle x?  
(1) 45 (3) 120  
(2) 60 (4) 135

STOP

x

1. One piece of a birdhouse that Natalie is building is shaped like a regular pentagon, as shown in the accompanying diagram.

If side AE is extended to point F, what is measure of exterior angle DEF?  
(1) 36 (3) 108  
(2) 72 (4) 144

F

E

B

D

C

A

1. Melissa is walking around the outside of a building that is in the shape of a regular polygon. She determines that the measure of one exterior angle of the building is 60. How many sides does the building have?

(1) 6 (3) 3  
 (2) 9 (4) 12