

*P.I. G.G.37: Investigate, justify, and apply theorems about each interior and exterior angle measure of regular polygons*

1. Find the measure of one of the interior angles of a regular polygon with ten sides.  
 [A]  $18^\circ$                       [B]  $36^\circ$                       [C]  $162^\circ$                       [D]  $144^\circ$
  
2. Find the measure of one of the interior angles of a regular polygon with twelve sides.  
 [A]  $150^\circ$                       [B]  $30^\circ$                       [C]  $165^\circ$                       [D]  $15^\circ$
  
3. Find the measure of each interior angle of a regular heptagon.
  
4. Find the measure of each interior angle of a regular nonagon.
  
5. Find the measure of an interior angle and an exterior angle of a regular polygon with 8 sides.
  
6. Find the measure of an interior angle and an exterior angle of a regular polygon with 40 sides.
  
7. Compare the quantity in Column A with the quantity in Column B.  

<u>Column A</u>	<u>Column B</u>
the measure of each exterior angle of a regular pentagon	the measure of each exterior angle of a regular hexagon

[A] The quantity in Column A is greater.                      [B] The quantity in Column B is greater.  
 [C] The quantities are equal.  
 [D] The relationship cannot be determined on the basis of the information given.

Geometry Practice: G.G.37

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[1] D

[2] A

[3]  $128.571^\circ$

[4]  $140^\circ$

[5]  $45^\circ, 135^\circ$

[6]  $9^\circ, 171^\circ$

[7] A