

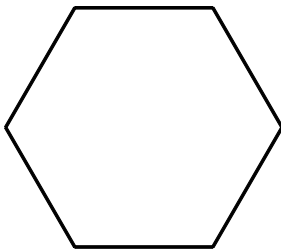
NAME: _____

P.I. G.G.36: Investigate, justify, and apply theorems about the sum of the measures of the interior and exterior angles of polygons

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

1. Find the sum of the measures of the interior angles of an octagon.

2. Find the sum of the measures of the interior angles in the figure.



3. Find the measure of one of the interior angles of a regular polygon with ten sides.

[A] 18° [B] 36° [C] 162° [D] 144°

4. Find the measure of each interior angle of a regular heptagon.

5. Find the measure of an interior angle and an exterior angle of a regular polygon with 40 sides.

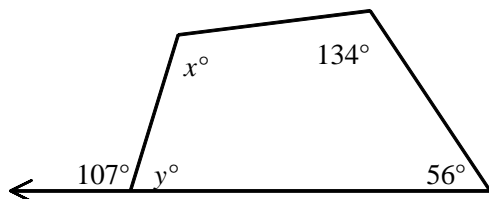
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6. Compare the quantity in Column A with the quantity in Column B.

<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

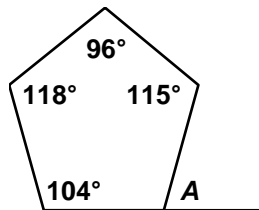
- [A] The quantity in Column A is greater. [B] The quantity in Column B is greater.
[C] The quantities are equal.
[D] The relationship cannot be determined on the basis of the information given.

7. Find x and y .



8. Find $m\angle A$.

- [A] 104° [B] 108 [C] 117 [D] 73 [E] 72



[1] 1080°

[2] 720°

[3] D

[4] 128.571°

[5] 9°, 171°

[6] A

[7] $x = 97, y = 73$

[8] D