Geometry: Y'all TRY POLYGON finale Name_____ Hr: _____

CONCEPT: The SUM of <u>interior angles</u> of any Polygon may be found by (n - 2) * 180°.
CONCEPT: The SUM of <u>exterior angles</u> of any Polygon is exactly 360°.

1.) Find each for a polygon with 15 sides:

Interior angle **sum**:_____

Exterior angle **sum**:_____

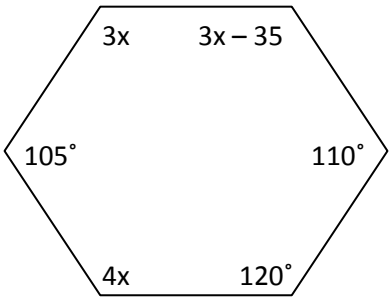
2.) Find each for a polygon with 18 sides:

Each interior angle measure:_____

Each exterior angle measure: _____

<u>Find the value of x.</u>

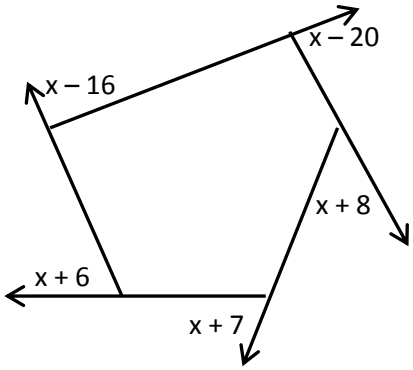
3.) Find the value of x.



x = _____

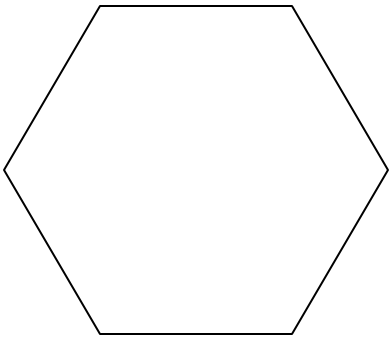
<u>Find the value of x.</u>

4.) Find the value of x.

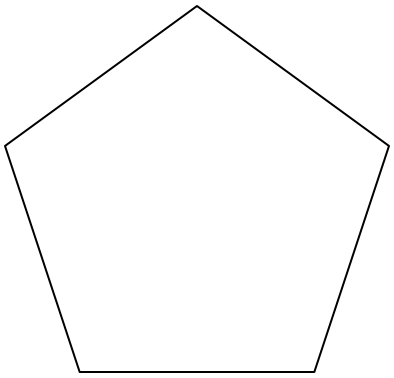


x = _____

5.) Draw in one **apothem** for the Hexagon below.



6.) Draw in one radius for the pentagon below.



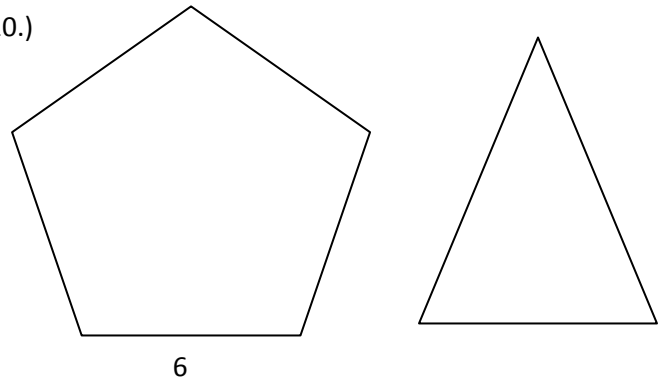
7.) What is the correct interior angle sum for a pentagon?

8.) Which **regular polygon** below has a single exterior angle measure of 45° ?

9.) The Three (3) interior angles of any triangle must add up to:

Find the area of each REGULAR POLYGON. An enlarged-view Triangle is provided to help SHOW WORK!

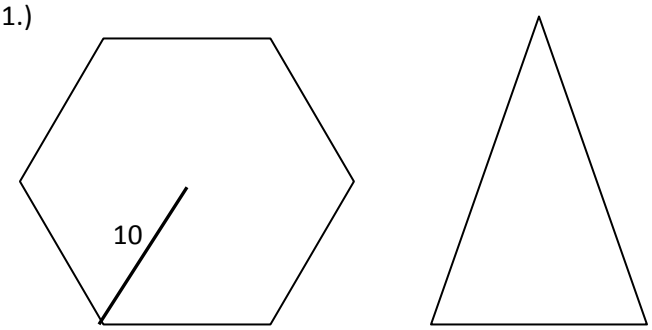
10.)



$\mathbf{A_{triangle}}$ =

Total Area =

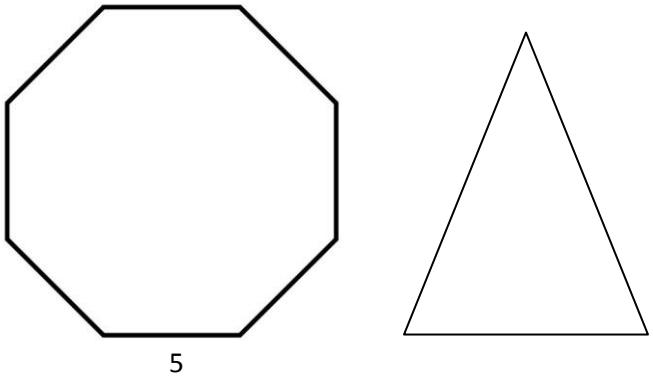
11.)



$\mathbf{A_{triangle}}$ =

Total Area =

12.)



$\mathbf{A_{triangle}}$ =

Total Area =