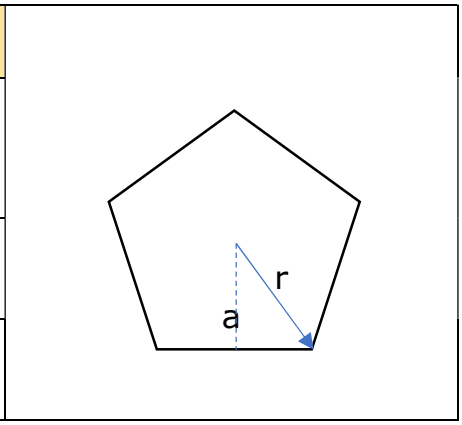
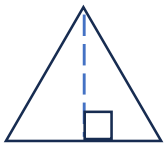
Polygon Area Homework

Write your answers on notebook paper, not this sheet.

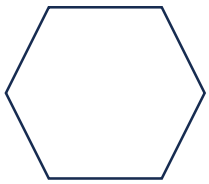
n = number of sides a = apothem	s = side length r = radius	
If you know the side length, divide it into triangles.	$n\ (\frac{1}{2}\ s\ a)$	
If you know the radius	$n\ r^2 \sin(\frac{180}{n}) \cos(\frac{180}{n})$	
If you know the apothem	$na^2 \tan(\frac{180}{n})$	

Calculate the perimeter **and** area. Write the formula. Plug in the given values. Show your work. Include the units in your answers. Round answers to 2 decimal places.

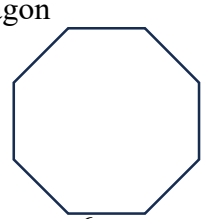
1. Equilateral triangle



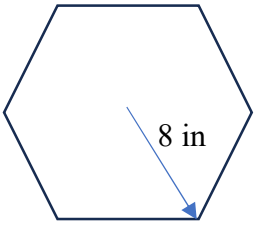
2. Hexagon



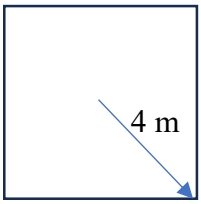
3. Octagon



4. Hexagon



5. Square



6. Decagon

Radius = 15 ft