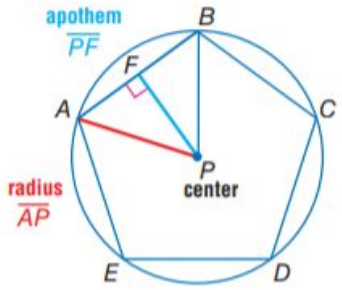
Apothem:

Central Angle of a Regular Polygon:



$\angle APB$ is a central angle of regular pentagon $ABCDE$.

1. Identify the following:

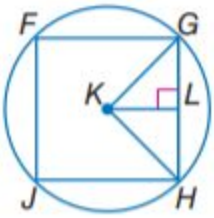
Radius:

Diameter:

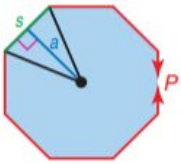
Apothem:

Central Angle:

Measure of the Central Angle =



2. Area of a Regular Polygon:



Area of a Regular Polygon: The area of a regular n-gon with side length s is half the product of the apothem *a* and the perimeter P, so

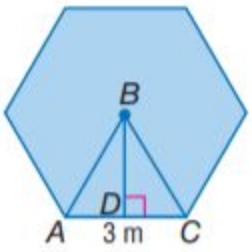
$$A = \frac{1}{2}aP \text{ or } A = \frac{1}{2}a * ns$$

Steps (finding area of a regular polygon):

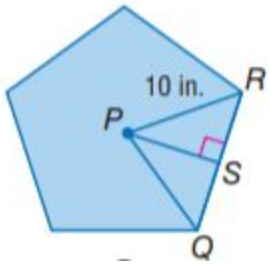
1. Central Angle
2. Solve the triangle formed with the apothem
    a. Solve all angles
    b. Solve apothem
    c. Solve side
3. Find the perimeter
4. Find area

3. Find the area of each regular polygon. Round your answer to the nearest tenth:

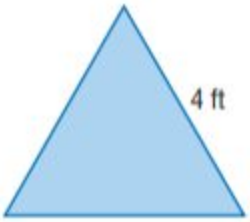
a.



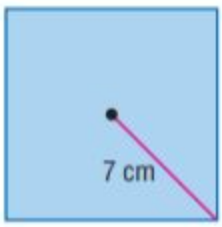
b.



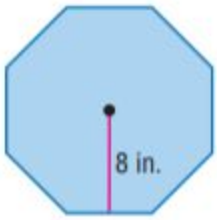
c.



d.



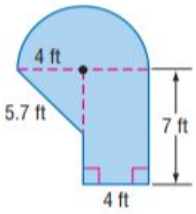
e.



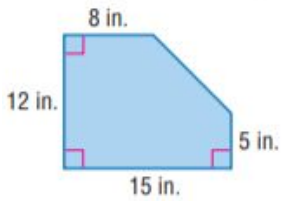
Composite Figure:

4. Find the area of each composite figure:

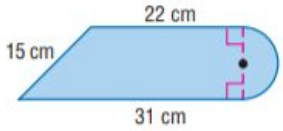
a.



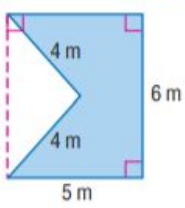
b.



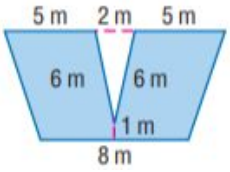
c.



d.



e.



f.