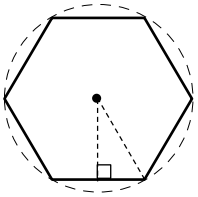
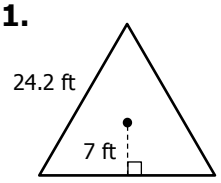
Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes
AREA of a REGULAR POLYGON	**Parts of a Regular Polygon:** • The distance from the center of a polygon to any side is called the _____. • The _____ of a regular polygon is the distance from the center to a vertex.  **Formula for Area of a Regular Polygon:** $A = \frac{1}{2}ap$ a = apothem p = perimeter

Examples: Find the area of each regular polygon.

1.



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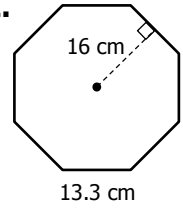
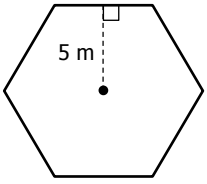


Steps to find the apothem and/or side length.

①	Create a **right triangle** by drawing the apothem and radius.
②	Find the **measure of the interior angle** where the radius intersects the vertex. Use the interior angles sum formula $(S = (n-2)\cdot 180)$, then divide by n, then by 2.
③	Use **special right triangles** (45°-45°-90°/30°-60°-90°), or **trigonometry** (SOH CAH TOA) to find the apothem and/or side lengths.

3.



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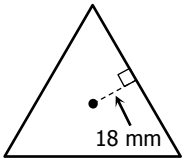

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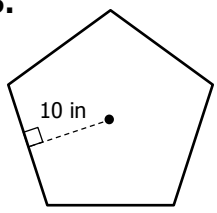

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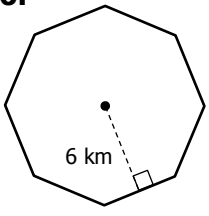

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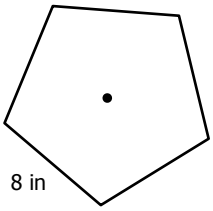

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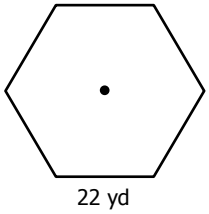

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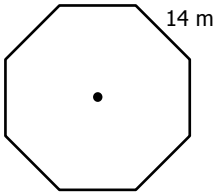

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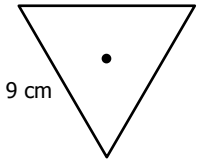

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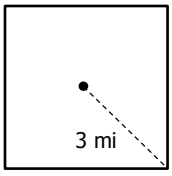

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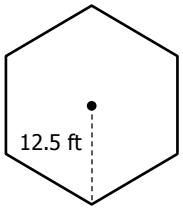

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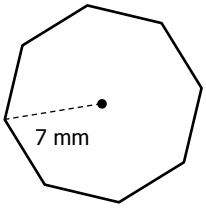

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