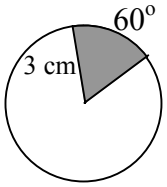
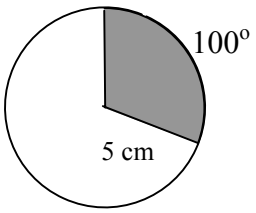
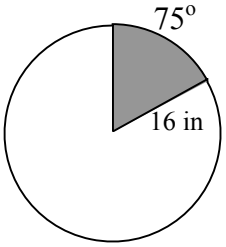
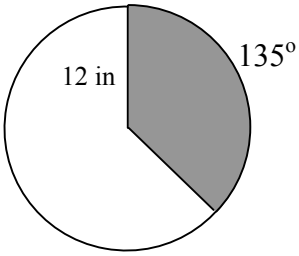
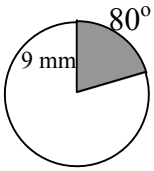
Find the area of each shaded sector.

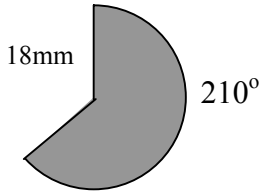
1. 

2. 

3. 

4. 

5. 

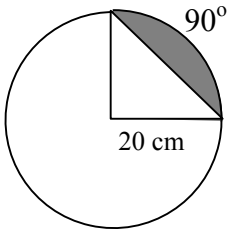
6. 

7. A sector has an area of 36π cm^2. The radius of the sector is 6 cm. What is the degree measure of the intercepted arc?

8. A sector has an area of 12π in^2. The measure of the intercepted arc is 120^o. What is the radius of the circle?

Practice: Find the area of the following shaded segments of circles.

1.



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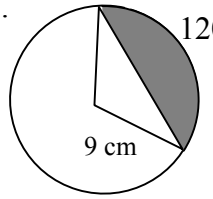

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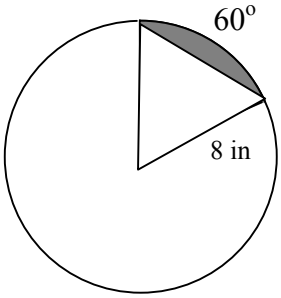

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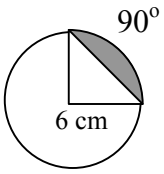

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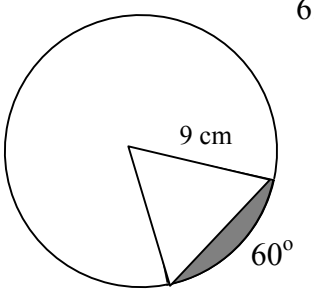

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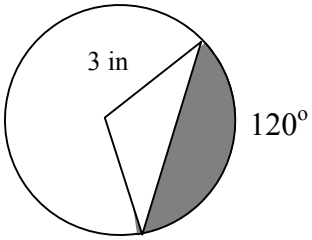
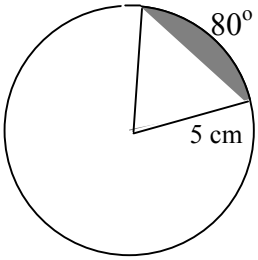


7. Use right triangle trigonometry to help you find the area of this segment.



A *locus* (pl. *loci*) is a set of points, all of which meet a stated condition. To sketch a locus, draw points of the locus until you see a pattern.

Examples: Draw and describe the following loci:

1. In a plane, the points 2 cm from a given point P.

2. In a plane, the points equidistant from two parallel lines.

3. In a plane, the points equidistant from two given points.

4. In a plane, the points 3 cm from a given line segment.

5. Describe the loci in the first four problems, when the word *plane* is replaced with space.

Draw a sketch and write a description for each of the following.

1. The locus of points in a plane that are 4 units from a given line.

2. The locus of points in a plane that are equidistant from two parallel lines which are 5 cm apart.

3. The locus of points in a plane 10 cm from point *A*.

4. The locus of points in your bedroom equidistant from the ceiling and the floor.

5. The locus of points on a football field equidistant from both goal lines.

6. The locus of points equidistant from the vertices of triangle *ABC*.

7. The locus of points that are equidistant from the sides of triangle *ABC*.

Write a description for each of the following.

8. The locus of points in space 5 cm from a given point.

9. The locus of points in space equidistant from given two points.

10. The locus of points in space 5 cm from a given line.

11 The locus of points in space equidistant from the vertices of a square.