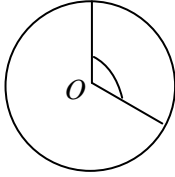


Circles and Polygons

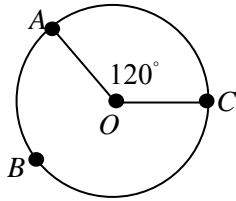
Long-Term Memory Review

Review 1 (Note: Figures are not drawn to scale.)

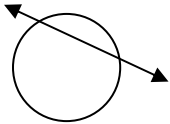
1. Fill in the Blank: In circle O below, the angle shown is a/an _____ angle.



2. The measure of a central angle and the measure of the arc that it intersects are equal. Use this fact to determine the measure of arc \widehat{ABC} in circle O .



3. Circle the correct term used to describe the line shown in the picture below.



chord secant tangent diameter radius

4. Identify the number of sides in each polygon listed.

_____ nonagon

_____ hexagon

_____ pentagon

_____ triangle

_____ decagon

_____ octagon

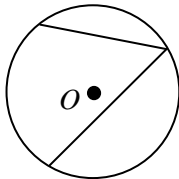
5. What is the sum of the measures of the interior angles of a triangle?
6. Draw a convex pentagon. Partition the pentagon into non-overlapping triangles. Count the number of triangles and use this to determine the sum of the interior angles of a pentagon.
7. What is the sum of the exterior angles of a convex polygon?

Circles and Polygons

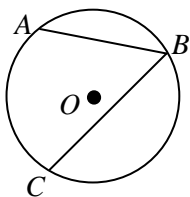
Long-Term Memory Review

Review 2 (Note: Figures are not drawn to scale.)

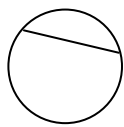
1. Fill in the Blank: In circle O below, the angle shown is a/an _____ angle.



2. The measure of an inscribed angle is half of the measure of the arc that it intercepts. Use this fact to determine the measure of arc \widehat{AC} in circle O , if $m\angle ABC = 43^\circ$?



3. Circle the correct term used to describe the line segment shown in the picture below.



radius chord diameter secant tangent

4. Identify the number of sides in each polygon listed.

_____ quadrilateral _____ heptagon _____ dodecagon
_____ octagon _____ pentagon _____ nonagon

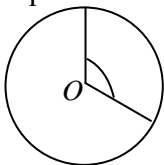
5. What is the sum of the measures of the interior angles of a triangle?
6. Draw a convex hexagon. Partition the hexagon into non-overlapping triangles. Count the number of triangles and use this to determine the sum of the interior angles of a hexagon.
7. A regular polygon is a polygon with congruent sides and congruent angles. What is the measure of **one exterior** angle of a hexagon?

Circles and Polygons

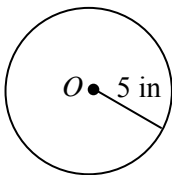
Long-Term Memory Review

Review 3 (Note: Figures are not drawn to scale.)

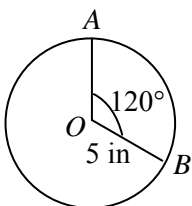
1. The measure of the central angle shown below is 120° . What fraction of the circle does this represent?



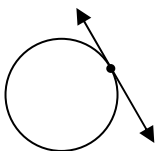
2. Find the circumference of circle O . Leave your answer in terms of pi. ($C = 2\pi r$)



3. Find the arc length of \widehat{AB} in circle O . Leave your answer in terms of pi.



4. Circle the correct term used to describe the line shown in the picture below.



secant radius chord tangent diameter

5. Fill in the table below.

Number of Sides	Name of Polygon	Sum of the Measures of the Interior Angles
3		
	quadrilateral	
5		
		720°
	heptagon	
	octagon	
9		
		1440°

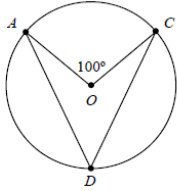
6. Use the results from the table above to determine a formula for the sum of the measures of the interior angles of an n -sided polygon.

Circles and Polygons

Long-Term Memory Review

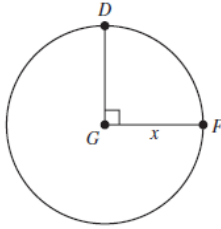
Review 4 (Note: Figures are not drawn to scale.)

1. In the diagram below, points A , C , and D , are on circle O .



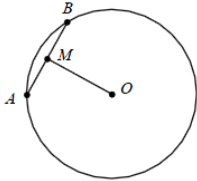
What is the measure of $\angle ADC$?

2. In the diagram below, point D and point F are on circle G .



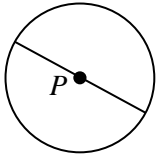
Write an expression that describes the length of minor arc DF .

3. In the diagram below, M is the midpoint of chord AB on circle O , $AB = 16$ centimeters, and $OM = 15$ centimeters.



What is the radius of circle O ?

4. Circle the correct term used to describe the line segment shown in the picture below of circle P .



secant

radius

chord

tangent

diameter

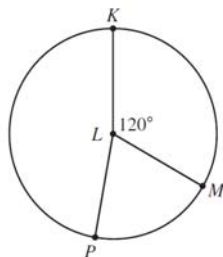
5. Fill in the Blank: A regular polygon has congruent _____ and congruent _____.
6. Consider a regular nonagon.
- What is the sum of the interior angles?
 - What is the measure of one interior angle?
 - What is the sum of the exterior angles?
 - What is the measure of one exterior angle?

Circles and Polygons

Long-Term Memory Review

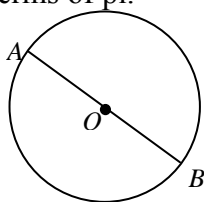
Quiz (Note: Figures are not drawn to scale.)

1. Circle L is shown below.



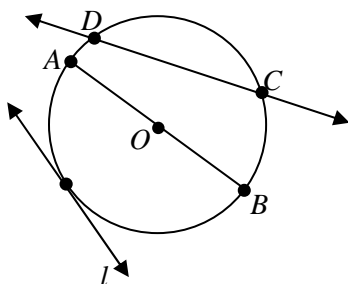
What is the measure of \widehat{KPM} ?

2. In circle O shown in the diagram below, \overline{AB} is a diameter, and $OB = 3$ feet. Leave your answer in terms of pi.



What is the length of \widehat{AB} ?

3. Fill in the Blank: Identify the word that **best** describes each line or line segment listed. (Use each word once.)



secant radius chord tangent diameter

\overline{DC} _____

\overline{DC} _____

\overline{AB} _____

Line l _____

\overline{AO} _____

4. Write the formula to determine the sum of the interior angles of an n -sided polygon.

5. Consider a regular pentagon.
- What is the sum of the interior angles?
 - What is the measure of **one** interior angle?
 - What is the sum of the exterior angles?
 - What is the measure of **one** exterior angle?

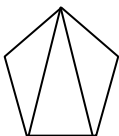
Circles and Polygons

Long-Term Memory Review

ANSWERS

Review 1 – Answers

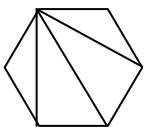
1. central
2. 240°
3. secant
4. $\underline{9}$ nonagon $\underline{6}$ hexagon $\underline{5}$ pentagon
- $\underline{3}$ triangle $\underline{10}$ decagon $\underline{8}$ octagon
5. 180°



6. 3 triangles, $3(180^\circ) = 540^\circ$
7. 360°

Review 2 Answers

1. inscribed
2. 86°
3. chord
4. $\underline{4}$ quadrilateral $\underline{7}$ heptagon $\underline{12}$ dodecagon
- $\underline{8}$ octagon $\underline{5}$ pentagon $\underline{9}$ nonagon
5. 180°



6. 4 triangles, $4(180^\circ) = 720^\circ$
7. 60°

Review 3 Answers

1. $\frac{1}{3}$
2. 10π inches
3. $\frac{10\pi}{3}$ inches
4. tangent
- 5.

Number of Sides	Name of Polygon	Sum of the Measures of the Interior Angles
3	triangle	180°
4	quadrilateral	360°
5	pentagon	540°
6	hexagon	720°
7	heptagon	900°
8	octagon	1080°
9	nonagon	1260°
10	decagon	1440°

6. $(n - 2)180^\circ$

Circles and Polygons

Long-Term Memory Review

Review 4 Answers

1. 50°
2. $\frac{\pi x}{2}$
3. 17 centimeters
4. diameter
5. sides, angles
6. a) 1260° b) 140° c) 360° d) 40°

Quiz – Answers

1. 240°
2. 3π feet
3. \overline{DC} secant \overline{DC} chord \overline{AB} diameter Line l tangent \overline{AO} radius
4. $(n - 2)180^\circ$
5. a) 540° b) 108° c) 360° d) 72°