

Questions on 7.4 HW?

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Ready
 Topic: Radius and Area or Circumference

Area of Circle:
 $A = \pi r^2$

Circumference:
 $C = \pi d = 2\pi r$

Given the area or circumference or radius find the other two.

1. Radius = 1 m
 Area =
 Circumference =


2. $A = 9\pi = \pi r^2$
 $\frac{9\pi}{\pi} = \frac{\pi r^2}{\pi}$
 $9 = r^2$
 $3 = r$


3. Radius = 3 ft
 Area = $9\pi \text{ ft}^2$
 Circumference = $6\pi \text{ ft}$
 $C = 2\pi 3 = 6\pi$

4. R =
 A = 3.14 m^2
 C =

5. R = 7 miles
 A =
 C =

6. Radius =
 Area =
 Circumference = $8\pi \text{ yds}$

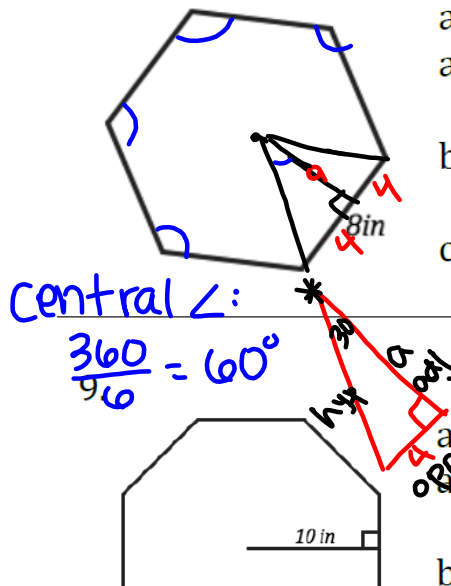
7.  a. Measure of one interior

8.  a. Measure of one

8.50 x 11.00 in

For each of the regular polygons find the measure of the interior angle and the area.

7.



- a. Measure of one interior angle: 120°
- b. Perimeter: $6 \cdot 8 = 48 \text{ in}$
- c. Area: 166.08 in^2

8.



- 10. A regular pentagon with side equal to 10 in.
- a. Measure of one interior angle:
- b. Perimeter:

a) Sum of interior \angle s in a polygon:
 $180(n-2) = S$

One interior \angle :

$$\frac{180(6-2)}{6} = \frac{180(4)}{6} = \frac{720}{6} = \boxed{120^\circ}$$

c) Area of a regular polygon:

$$A = \frac{1}{2} \cdot P \cdot a$$

where P = perimeter and a = apothem

TOA

$$a \cdot \tan 30 = \frac{4}{a} \cdot a$$

$$\frac{a \cdot \tan 30}{\tan 30} = \frac{4}{\tan 30}$$

$$a = \frac{4}{\tan 30}$$

$$\boxed{a = 6.92}$$

$$A = \frac{1}{2} \cdot P \cdot a$$

$$A = \frac{1}{2} \cdot 48 \cdot 6.92$$

$$\boxed{A = 166.08 \text{ in}^2}$$

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15. 95° 7 m

16. 170° 2 m

Handwritten solutions for problem 16:

$$S = \frac{160}{360} (\pi \cdot 5^2)$$

$$S = \frac{4}{9} \cdot \frac{25\pi}{1}$$

$$S = \frac{100\pi}{9} \approx 34.9 \text{ in}^2$$

Need Assistance? Check out these additional resources:
<http://www.regentsprep.org/regents/math/geometry/GP14/CircleSectors.htm>

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8.50 x 11.00 in

Area of a sector of a circle:

$$S = \frac{\theta}{360^\circ} (\pi r^2)$$

where θ = angle in degrees

SM2 - Unit 7 Outline.pdf - Adobe Acrobat Reader DC

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Secondary Math II Unit 7: Circles

Date (subject to change):	Lesson	Homework & Stamp (Homework is due 2 class days after lesson is taught)
B: 3/28/2017 3/30 A: 3/29/2017	7.3 Cyclic Polygons *We are skipping 7.1 and 7.2*	7.3 Ready, Set, Go (pgs.19-21) Complete: _____
B: 4/30/2017 4/3 A: 3/31/2017	7.4 Planning the Gazebo	7.4 Ready, Set, Go (pgs.24-25) Complete: _____
B: 4/13/2017 4/5 A: 4/4/2017	7.6 Circular Reasoning *We are skipping 7.5*	7.6 Ready, Set, Go (pgs.35-36) Complete: _____
B: 4/5/2017 4/7 A: 4/6/2017	7.7 Pied	7.7 Ready, Set, Go (pgs.39-41) Complete: _____
4/17/2017 4/17- 4/20/2017 4/20	SAGE REVIEW <i>Spring Break: April 10-14</i>	
4/21/2017-	SAGE TEST	

8.50 x 11.00 in

7.6 Circular Reasoning

A Practice Understanding Task

The following problems will draw upon your knowledge of similarity, circle relationships and trigonometry.



In the following diagram the radius of $\odot D$ is 5 cm and F is the midpoint of \overline{AE} . The measures of arc EB and arc BC are given in the diagram. Find the measures of all other unmarked angles, arcs and segments.

Tangent lines to $\odot D$
 \overline{GE} and \overline{GA}

$$m\angle EGA = \frac{1}{2}(m\widehat{EBA} - m\widehat{AE})$$

$$m\angle EGA = \frac{1}{2}(220 - 140)$$

$$m\widehat{AE} = 180 - 40 = 140$$

$\triangle ABC$

$$10 \cdot \sin 30 = \frac{a}{10}$$

$$10 \cdot \sin 30 = a$$

$$5 = a$$

$$10 \cdot \cos 30 = \frac{b}{10}$$

$$10 \cdot \cos 30 = b$$

$$8.7 = b$$

$\triangle AFD$
 CAH

$$5 \cdot \cos 20 = \frac{y}{5}$$

$$5 \cdot \cos 20 = y$$

$$4.7 = y$$

$$m\widehat{AC} = 180 - 60 = 120$$

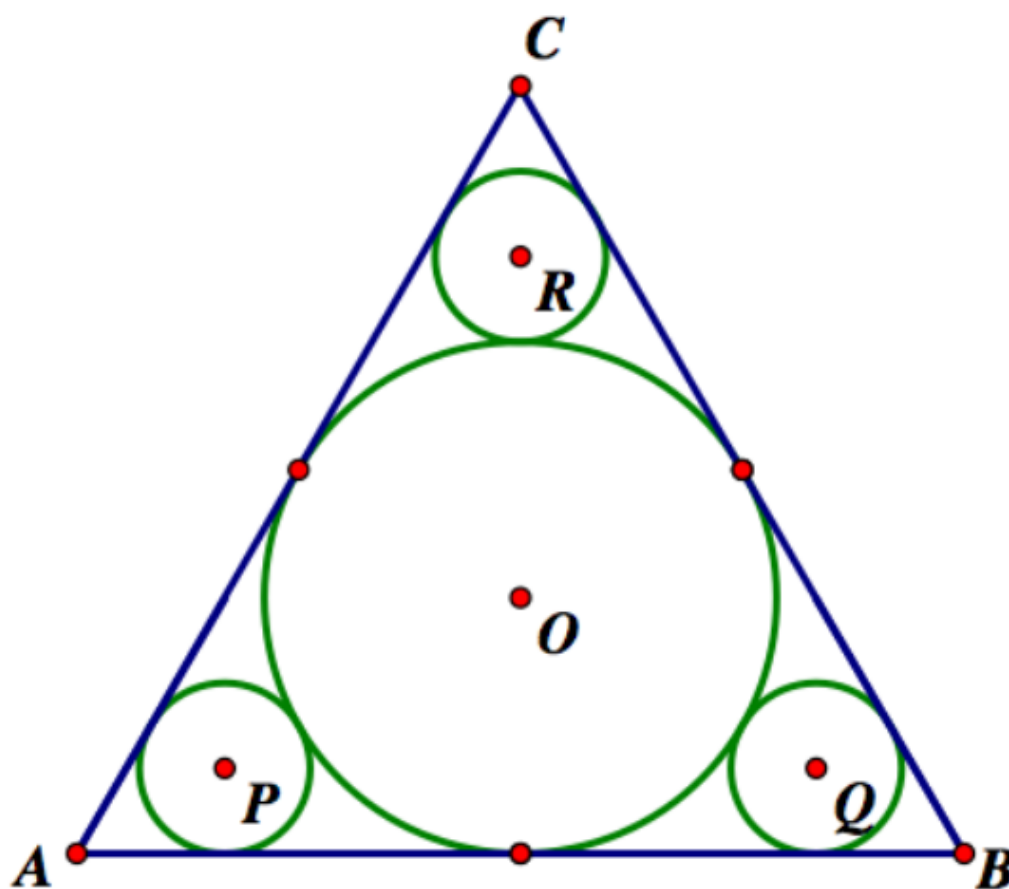
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$$5 \cdot \sin 20 = \frac{x}{5}$$

$$5 \cdot \sin 20 = x$$

$$1.4 = x$$

In the diagram below $\triangle ABC$ is equilateral. All circles are tangent to each other and to the sides of the equilateral triangle. The radius of the three smaller circles, $\odot P$, $\odot Q$ and $\odot R$, is 4 cm. The radius of $\odot O$ is not given. Find the circumference and area of each circle and the length of the sides of the equilateral triangle.



Homework

Finish 7.6 "Ready, Set, Go"