

Questions on 7.9 HW?

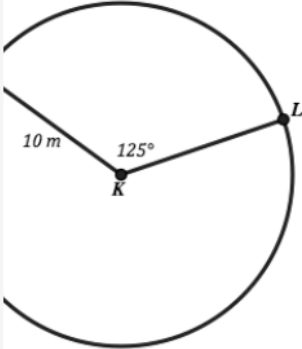
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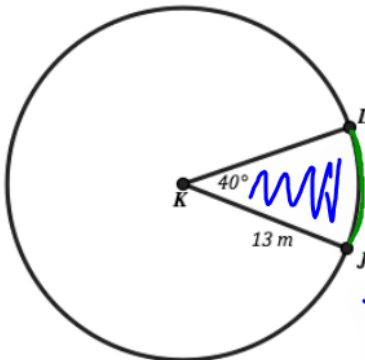
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1. Given $\odot K$ and marked angle measure. Find the measure of the length of \widehat{L} . Find the radian measure that goes with angle of 125° .



4. Given $\odot K$ and marked angle measure. Find the area of the small sector. Find the arc length.



Area
 $\frac{40}{360} (\pi 13^2) = 59 \text{ m}^2$

Length
 $\frac{40}{360} (2\pi 13) = 9.1 \text{ m}$

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Set
 Topic: Converting between radians and degrees.

$\pi \text{ rad} = 180^\circ$ $\frac{\pi \text{ rad}}{180^\circ}$ or $\frac{180^\circ}{\pi \text{ rad}}$
 D → R R → D

Convert each angle measure to radians or degrees based on what is given.

5. $100^\circ = 1.745 \text{ Radians}$ 6. $30^\circ =$ Radians 7. $225^\circ =$ Radians

$\frac{100^\circ}{1} \cdot \frac{\pi \text{ rad}}{180^\circ} = \frac{100\pi}{180}$

8. $\frac{\pi}{3} \text{ Radians} =$ Degrees 9. $5\pi \text{ Radians} =$ Degrees 10. $\frac{5\pi}{4} \text{ Radians} = 225^\circ \text{ Degrees}$

$\frac{5\pi}{4} \text{ rad} \cdot \frac{180^\circ}{\pi \text{ rad}} = \frac{5(180)^\circ}{4}$

11. $270^\circ =$ Radians 12. $90^\circ =$ Radians 13. $150^\circ =$ Radians

Go
 Topic: Finding centers of rotation.

Given the two figures below find the center of rotation that was used. Then use a compass to draw the concentric circles on which the vertex points of the triangle lie.

14. 15.

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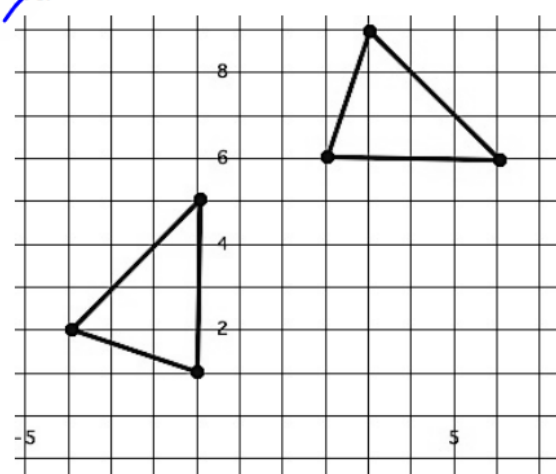
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Topic: Finding centers of rotation.

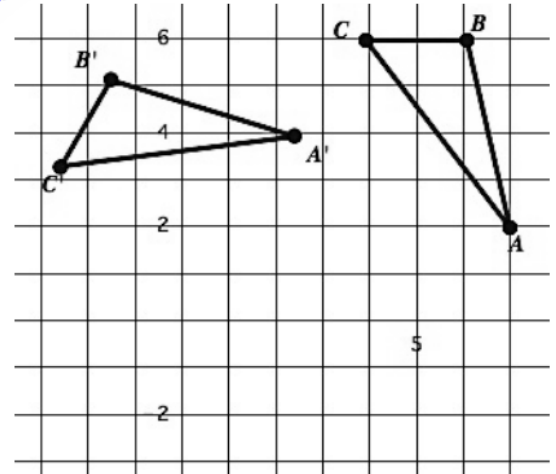
SKIP

Given the two figures below find the center of rotation that was used. Then use a compass to draw the concentric circles on which the vertex points of the triangle lie.

14.



15.



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Convert each angle measure to radians or degrees based on what is given.

5. $100^\circ =$ Radians 6. $30^\circ =$ Radians 7. $225^\circ =$ Radians

8. $\frac{\pi}{3}$ Radians = Degrees 9. 5π Radians = 900° Degrees 10. $\frac{5\pi}{4}$ Radians = Degrees

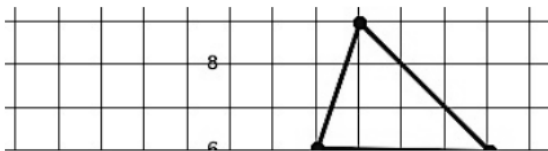
$\frac{5\pi \text{ rad.}}{\pi \text{ rad.}} \cdot \frac{180^\circ}{1} = 5(180^\circ)$

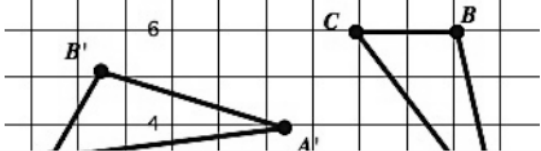
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Go

Topic: Finding centers of rotation.

Given the two figures below find the center of rotation that was used. Then use a compass to draw the concentric circles on which the vertex points of the triangle lie.

14. 

15. 

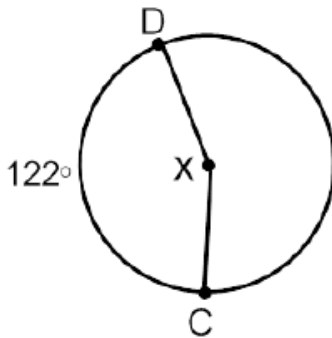
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SECONDARY MATH II
Module 7 Test Review: Circles

Directions: Show ALL work. Round any decimals to one decimal place, unless otherwise stated.

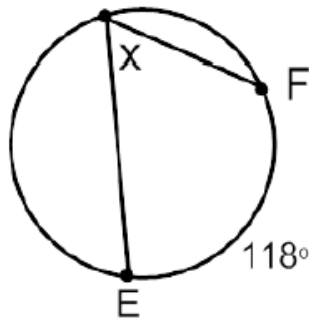
For 1-3: Determine what x equals in each circle below.

1.



$x = 122^\circ$

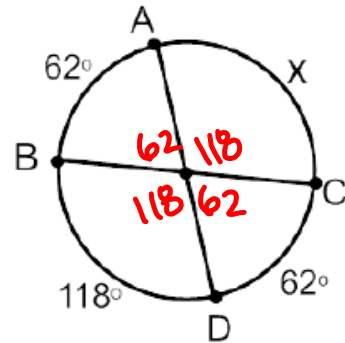
2.



$\frac{1}{2}(118) =$

$x = 59^\circ$

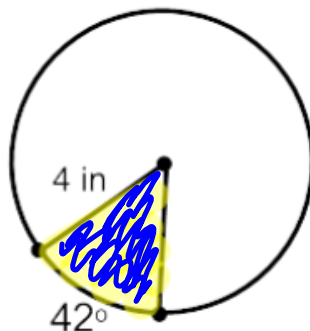
3.



$x = 118^\circ$

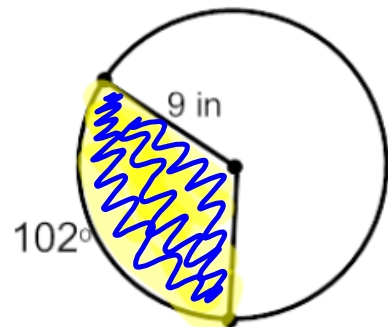
For 4-5: Find the area of the shaded sector below using the area of a sector formula, $A = \frac{\theta}{360}(\pi r^2)$.

4.



$\frac{42}{360}(\pi 4^2) =$

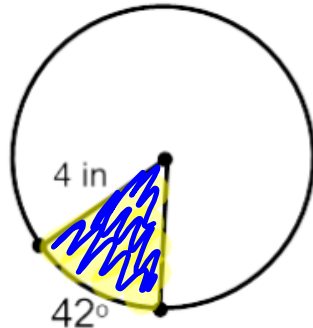
5.



$\frac{102}{360}(\pi 9^2) =$

For 6-7: Find the arc length of the shaded sector below using the arc length formula, $s = \frac{\theta}{360} (2\pi r)$.

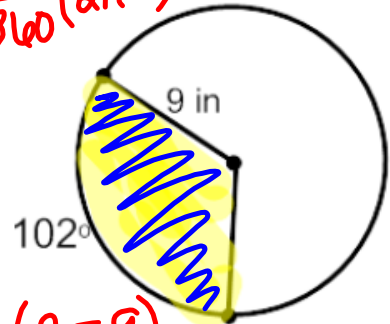
6.



$$\frac{42}{360} (2\pi \cdot 4) =$$

7.

$$s = \frac{\theta}{360} (2\pi r)$$



$$\frac{102}{360} (2\pi \cdot 9) =$$

For 8-10: Convert each angle measure from degrees to radians. Round your answer to three decimal places if necessary. Use either $\frac{\pi}{180^\circ}$ or $\frac{180^\circ}{\pi}$ to convert.

8. $75^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} =$

$$\frac{75\pi}{180} = 1.309 \text{ rad}$$

9. $112^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} =$

$$\frac{112\pi}{180} = 1.955 \text{ rad}$$

10. $22^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} =$

$$\frac{22\pi}{180} \text{ rad} = 0.384 \text{ rad}$$

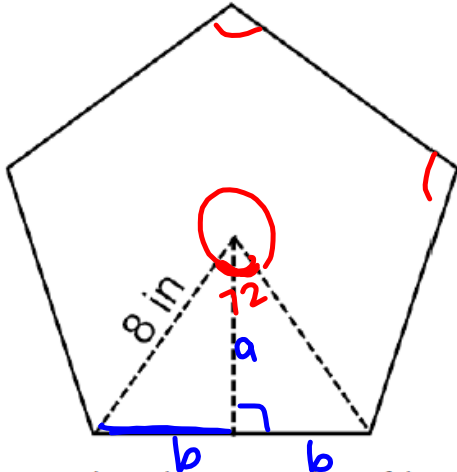
For 11-13: Convert each angle measure from radians to degrees. Round your answer to one decimal place if necessary. Use either $\frac{\pi}{180^\circ}$ or $\frac{180^\circ}{\pi}$ to convert.

11. $\frac{1}{6} \cdot \frac{180^\circ}{\pi} = \frac{180^\circ}{6} = 30^\circ$

12. $\frac{2}{3} \cdot \frac{180^\circ}{\pi} = \frac{2 \cdot 180^\circ}{3} = 120^\circ$

13. $\frac{1}{9} \cdot \frac{180^\circ}{\pi} = \frac{180^\circ}{9} = 20^\circ$

For 14-15: Use the regular pentagon below to answer the questions. Formulas:



Area of a regular polygon:

$$A = \frac{1}{2} Pa, \text{ where}$$

P = perimeter of polygon and
 a = apothem

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

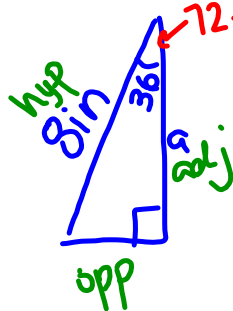
$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

Pythagorean Theorem: $a^2 + b^2 = c^2$

14. What is the measure of one of the 5 central angles of this regular pentagon?

$$\frac{360^\circ}{5} = 72^\circ$$

15. What is the measure of the apothem?

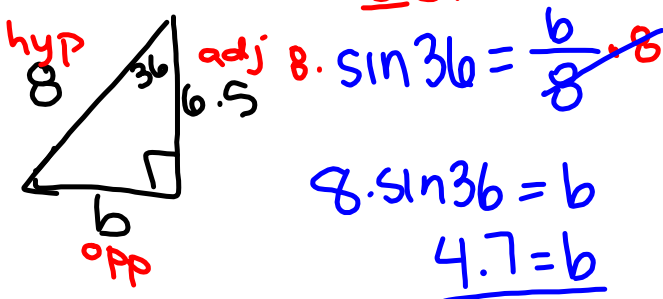


CAH
 $8 \cdot \cos 36 = \frac{a}{8}$

$$8 \cdot \cos 36 = a$$

$$\boxed{6.5 = a}$$

16. What is the measure of one of the 5 side lengths of this regular pentagon?



SOH
 $8 \cdot \sin 36 = \frac{b}{8}$

$$8 \cdot \sin 36 = b$$

$$\underline{4.7 = b}$$

17. What is the Perimeter of this regular pentagon?

$$P = 9.4(5)$$

$$P = \underline{47 \text{ in}}$$

side length is $2 \cdot b = 2(4.7) = 9.4 \text{ in}$

18. What is the area of this regular pentagon?

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

$$A = \frac{1}{2} \cdot 47(6.5)$$

$$\underline{A = 152.75 \text{ in}^2}$$

SOH - $\sin \theta = \frac{\text{opp}}{\text{hyp}}$
CAH - $\cos \theta = \frac{\text{adj}}{\text{hyp}}$
TOA - $\tan \theta = \frac{\text{opp}}{\text{adj}}$

Homework

Study for Module 7 Test