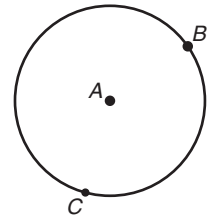


LESSON 12.2 Assignment

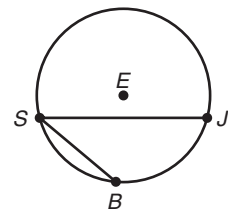
Name _____ Date _____

Gears Arc Length

1. In circle A shown describe the difference between the measure of minor arc BC and the length of minor arc BC .

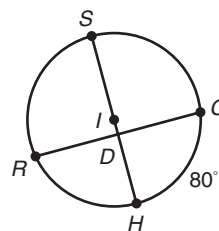


2. In circle E shown, the radius of the circle is 16 centimeters and $m\angle JSB$ is 40° . Determine the length of \widehat{JB} .



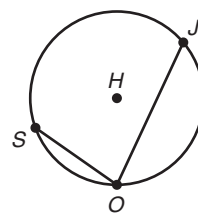
12

3. In circle I shown, the radius is 6 millimeters and $m\widehat{HC}$ is 80° .
- a. Determine the length of \widehat{SC} in millimeters.



- b. Determine the measure of \widehat{SC} in radians.

4. In circle H shown, the length of \widehat{SJ} is 24π centimeters and $m\angle JOS$ is 80° . Determine the length of a diameter of circle H .



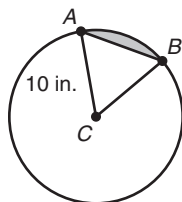
LESSON 12.3 Assignment

Name _____ Date _____

Playing Darts

Sectors and Segments of a Circle

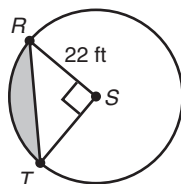
In circle C shown, $\triangle ABC$ is an equilateral triangle and $AC = 10$ inches.



1. Calculate the area of sector ACB . Express your answer in terms of π and as a decimal rounded to the nearest hundredth.
2. The height of $\triangle ABC$ is approximately 8.66 inches. Calculate the area of $\triangle ABC$.
3. Calculate the area of segment AB of circle C . Express your answer in terms of π and as a decimal rounded to the nearest hundredth.

Name _____ Date _____

In circle S , the radius is 22 feet and $m\angle RST = 90^\circ$.



6. Calculate the area of sector RST . Express your answer in terms of π and as a decimal rounded to the nearest hundredth.

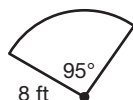
7. Calculate the area of segment RT . Express your answer in terms of π and as a decimal rounded to the nearest hundredth.

Name _____ Date _____

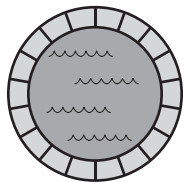
Circle K. Excellent!

Circle Problems

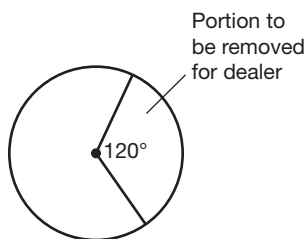
- Deborah would like to put edging along the circular edge of her flower garden. The following is a diagram of her flower garden. How much edging will she need if she just puts it along the circular part? Show all of your work and use 3.14 for π . Round your answer to the nearest hundredth if necessary.



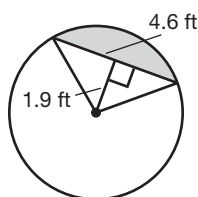
- Jonathan has a circular pool in his backyard with an 18-foot diameter. He would like to pave a 6-foot-wide circle around his pool. How much paved area will Jonathan have around his pool? Show all of your work and use 3.14 for π .



3. A company has a circular card table with a 4-foot diameter. They want to remove a portion to provide a place for the dealer to stand. See the following diagram. How much surface area of the table will be left for those who are sitting at the table? Show all your work and use 3.14 for π . Round your answer to the nearest hundredth if necessary.



4. Geneva has a circular table with a 6-foot diameter that she would like to put in her new kitchen. In order for it to fit up against the wall, she must cut off the portion of the table that is shaded in the following diagram. The measure of the central angle is 100° . How much surface area will she lose when she removes this part of the table? Show all your work and use 3.14 for π .

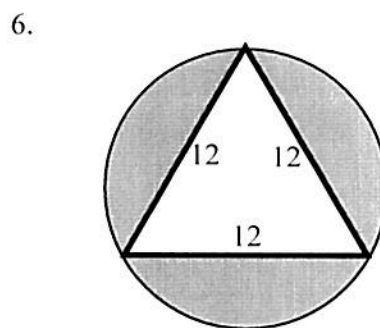
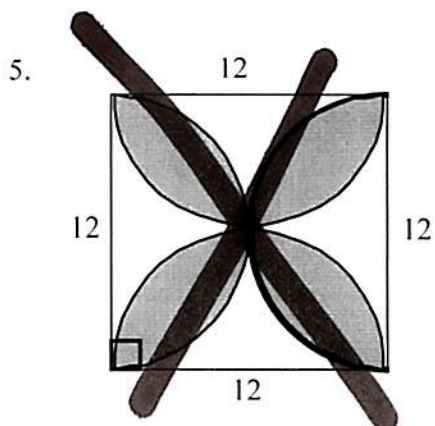
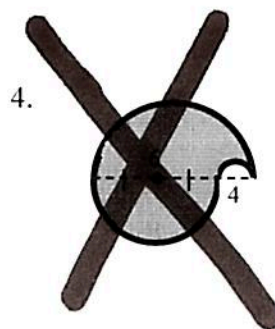
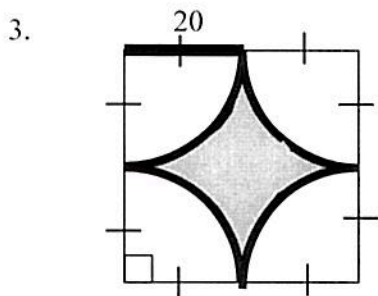
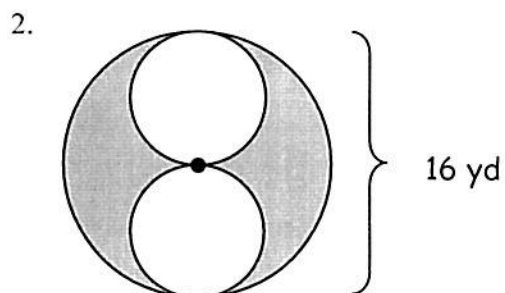
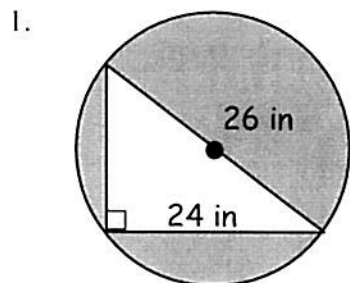


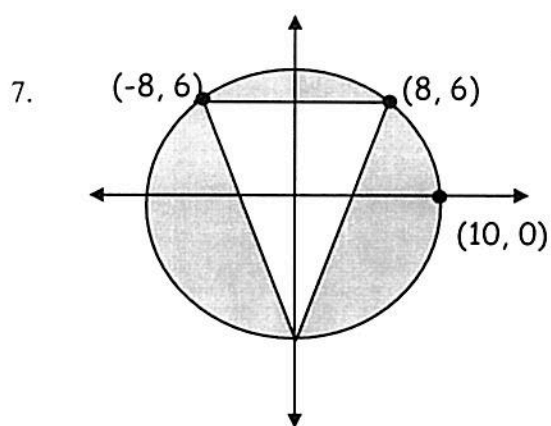
1.4.11 Arc Length and Sector Area
Pre-AP Geometry

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 Period _____ Date _____

EVALUATE

Find the area of the shaded regions. Assume that parts of circles that appear to be semicircles are semicircles. All curves are fractions of an arc. Leave answers with pi and round to three decimal places.

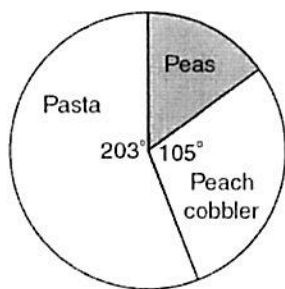




8. An advertisement states that a Roto-Sprinkler can water a circular region with area 1000 ft^2 . Find the diameter of this region to the nearest foot.

9. Sampson's dog, Cecil, is tied to a post by a chain 7 meters long. How much play area does Cecil have? Express your answer to the nearest square meter.

10. A frozen dinner is divided into 3 sections on a circular plate with a 12-inch diameter.



What is the approximate length of the arc of the section containing peas?