

Lesson 9T ~ Area of Sectors

Name _____ Period _____ Date _____

Area of a Sector

$$\frac{\text{degree of the sector}}{360^\circ} = \frac{\text{area of the sector}}{\text{area of the circle}}$$

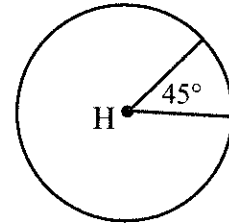
1. The area of $\odot H$ is 60 cm^2 . Find the area of the marked sector.

a. Complete the proportion.

$$\frac{\quad}{360^\circ} = \frac{x}{60}$$

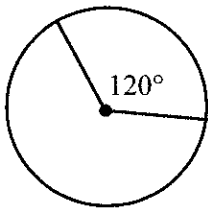
b. Solve the proportion.

c. What is the area of the sector? Label your answer.

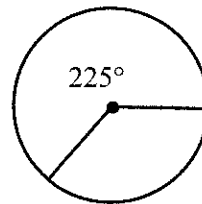


Use a proportion to find the area of each marked sector.

2. The area of the circle is 42.6 in^2 .



3. $A = 149.2 \text{ ft}^2$



4. Jamal ate 5 slices of pizza. Each slice of pizza had a central angle of 21° . The area of the whole pizza was 254.34 in^2 . How many square inches of pizza did Jamal eat?

a. Jamal ate 5 slices and each slice had a central angle of 21° . Find the total degree of pizza Jamal ate.

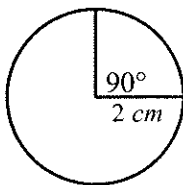
b. Write a proportion to solve for the area of the sector in **part a**.

c. How many square inches of pizza did Jamal eat?

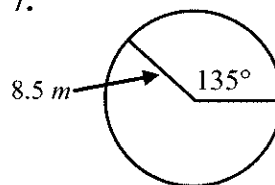
5. A circle has a radius that is 15 inches. Find the area of a sector with a 60° central angle.
- Find the area of the circle, remember $A = \pi r^2$. Use 3.14 for π .
 - Set up a proportion to find the area of the sector.
 - What is the area of the sector?

Find the area of each sector. Use 3.14 for π . Round to the nearest hundredth, if needed.

6.



7.



8. A sprinkler rotates back and forth watering a sector with an 80° central angle. The sprinkler has a 30 foot radius. Find the area the sprinkler waters. Use 3.14 for π .
9. The area of a sector is 27 ft^2 . The degree of the sector is 15° . What is the area of the circle?