

SEC. 2

Circle
Work Package
(area and sectors)

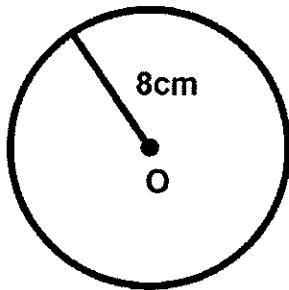
13 The Area of a Circle

EVALUATED

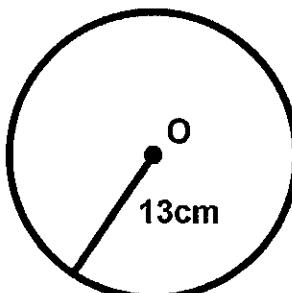


Skill Builder

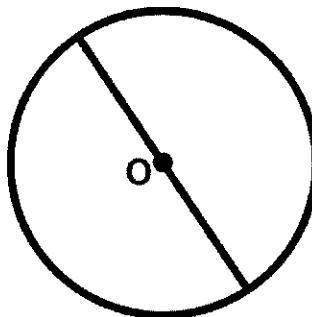
- 1** Calculate the area of the circle given below.



- 2** Calculate the area of the circle given below.

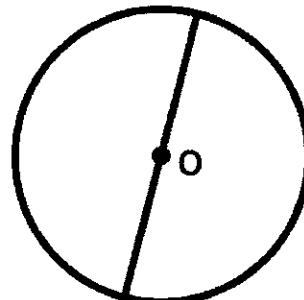


- 3** Calculate the area of the circle given below.



diameter = 24cm

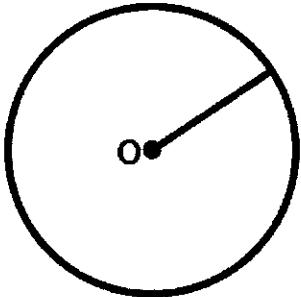
- 4** Calculate the area of the circle given below.



diameter = 4cm

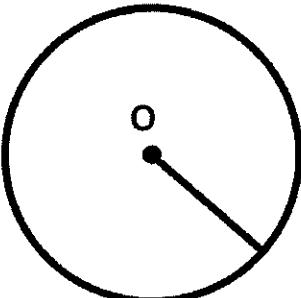
Skill Builder

- 5** Determine the radius of the circle given below whose area is 28.26cm^2 .

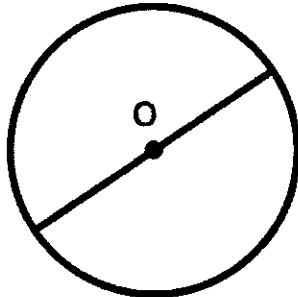


My Calculations

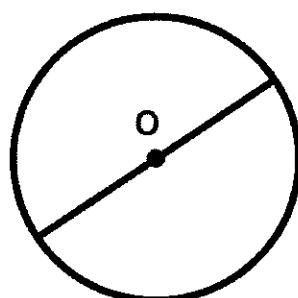
- 6** Determine the radius of the circle given below whose area is 50.24 cm^2 .



- 7** Determine the diameter of the circle given below whose area is 706.5cm^2 .

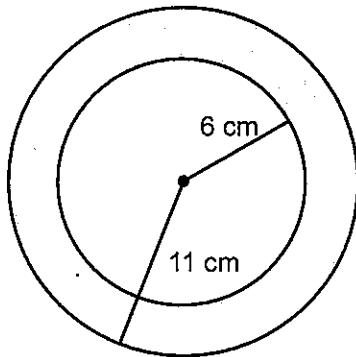


- 8** Determine the diameter of the circle given below whose area is 314cm^2 .



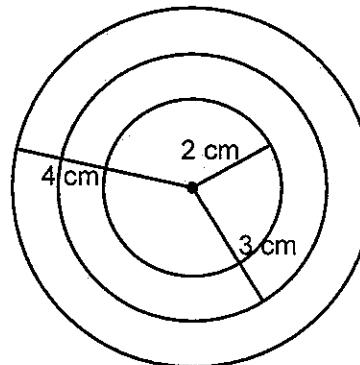
Skill Builder

- 9** Calculate the area of the shaded region in the diagram below.



My Calculations

- 10** Calculate the area of the shaded region in the diagram below.



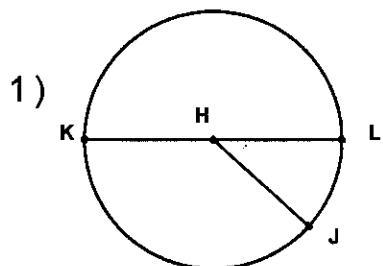
Name : _____

Score : _____

Teacher : _____

Date : _____

Solve the missing elements for each problem. Use 3.14 for π . Area = πr^2 ; C = πD

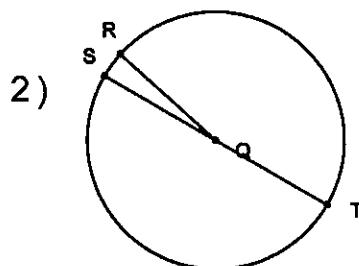


Radius: 11 cm

Diameter: _____

Circumference: _____

Area: _____

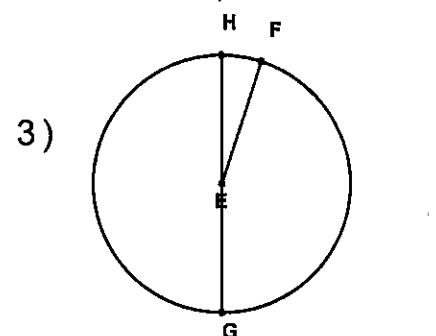


Radius: 4 cm

Diameter: _____

Circumference: _____

Area: _____

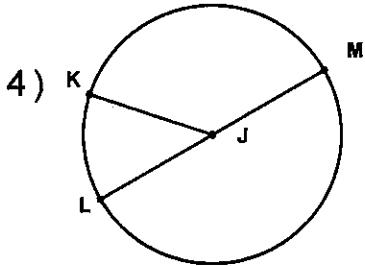


Radius: 10 cm

Diameter: _____

Circumference: _____

Area: _____

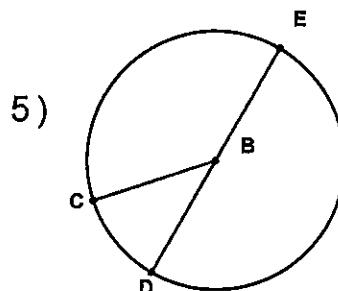


Radius: _____

Diameter: 40 cm

Circumference: _____

Area: _____

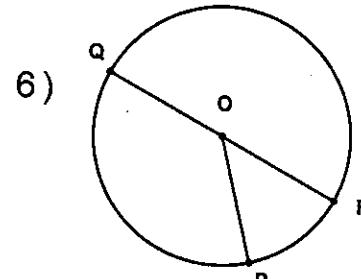


Radius: _____

Diameter: 6 cm

Circumference: _____

Area: _____

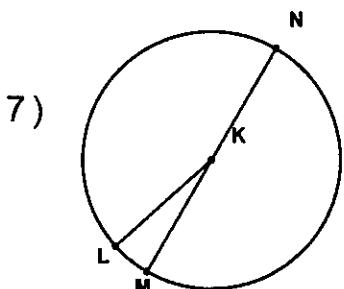


Radius: _____

Diameter: 14 cm

Circumference: _____

Area: _____

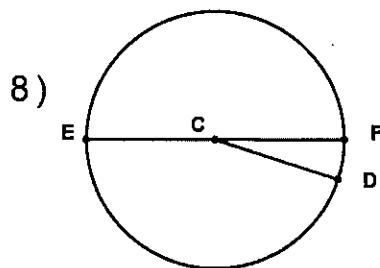


Radius: 9 cm

Diameter: _____

Circumference: _____

Area: _____

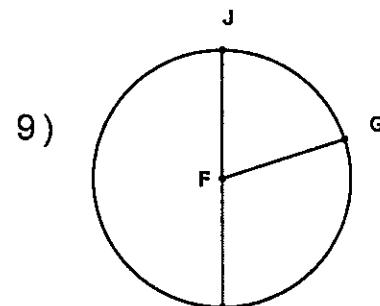


Radius: _____

Diameter: 28 cm

Circumference: _____

Area: _____



Radius: 15 cm

Diameter: _____

Circumference: _____

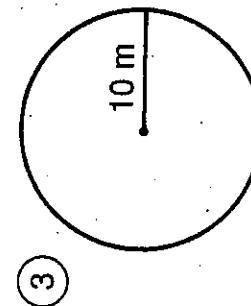
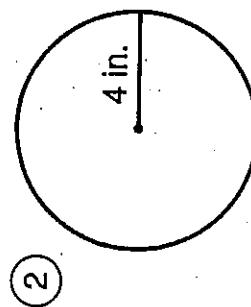
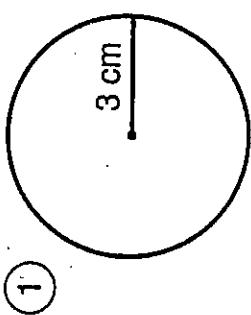
Area: _____

What Is Dangerous about Living for 7 Days on Just One Can of Sardines?

Answers 1 – 9:

- (P) 214.14 ft²
 (A) 54.84 in.²
 (U) 19.625 cm²
 (B) 361.14 m²
 (I) 28.26 cm²
 (G) 7,850 in.²
 (L) 314 m²
 (C) 5,1016 km²
 (F) 254.34 ft²
 (Q) 379.94 m²
 (O) 50.24 in.²
 (T) 18.485 cm²
 (A) 4,5216 km²
 (R) 12.56 cm²
 (R) 6,430 in.²

Find the area of each circle. Use 3.14 for π . Find your answer in the appropriate answer column. Write the letter of the answer in the space containing the number of the exercise. If the answer has a ●, shade in the space instead of writing a letter in it.



- (1) 4 in.
 (2) 3 cm
 (3) 10 m
- (4) $r = 2$ cm
 (5) $r = 9$ ft
 (6) $r = 1.2$ km
 (7) $r = 50$ in.
 (8) $r = 11$ in.
 (9) $r = 2.5$ cm

- (10) 14 in.
 (11) 10 cm
 (12) 3 m

- (13) $d = 16$ ft
 (14) $d = 40$ m
 (15) $d = 12$ in.
 (16) $d = 7$ cm
 (17) $d = 0.6$ km
 (18) $d = 2$ cm

Answers 10 – 18:

- (P) 1,416 m²
 (O) 78.5 cm²
 (D) 36.815 cm²
 (H) 7.065 m²
 (N) 0.2826 km²
 (M) 108.74 in.²
 (T) 1,256 m²
 (S) 211.36 ft²
 (L) 38.465 cm²
 (F) 3.14 cm²
 (Y) 200.96 ft²
 (R) 0.3416 km²
 (R) 8.415 m²
 (F) 113.04 in.²

13. 2 9 4 14. 1 7 17. 10 12 18. 6 3 16. 8 11 15. 5

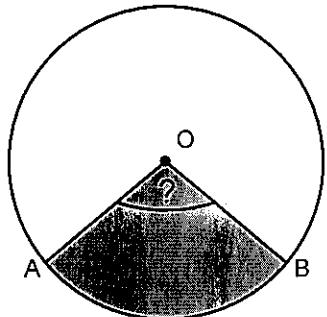
Skill Builder

14 Area of a Circular Sector

EVALUATED



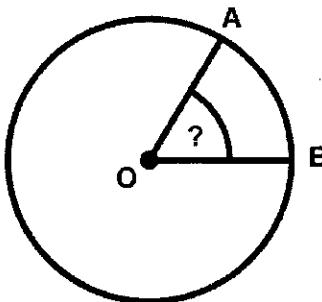
- 1** Given the circle and the information below, calculate $m\angle AOB$.



$$A_{Circle} = 254.34 \text{ cm}^2$$

$$A_{AOB} = 84.78 \text{ cm}^2$$

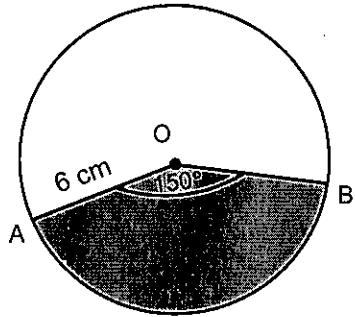
- 2** Given the circle and the information below, calculate $m\angle AOB$.



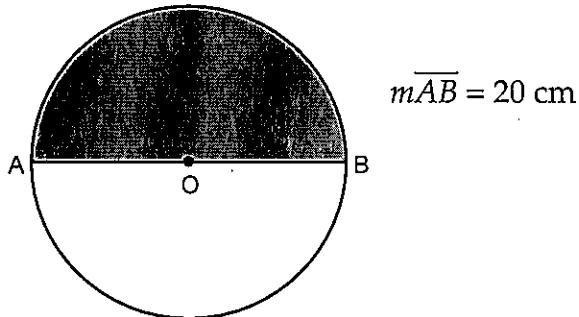
$$A_{\text{Circle}} = 452.16 \text{cm}^2$$

$$A_{\text{QB}} = 75.36 \text{ cm}^2$$

- 3** Given the information in the circle below, calculate the area of sector AOB .

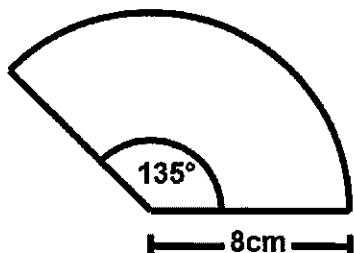


- 4** Given the information in the circle below, calculate the area of sector AOB .

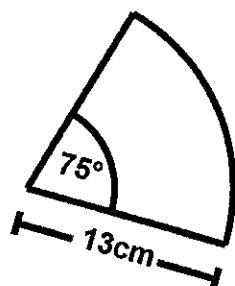


Skill Builder

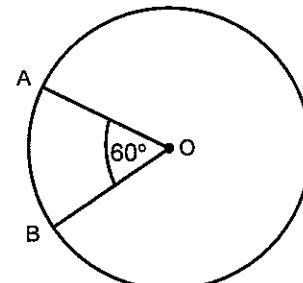
- 5** Calculate the area of the following shape.



- 6** Calculate the area of the following shape.



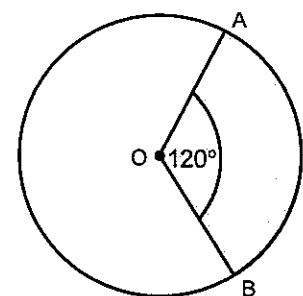
- 7** Given the circle and the information below, calculate the area of the circle.



$$A_{AOB} = 4.71 \text{ cm}^2$$

My Calculations									

- 8** Given the circle and the information below, calculate the area of the circle.

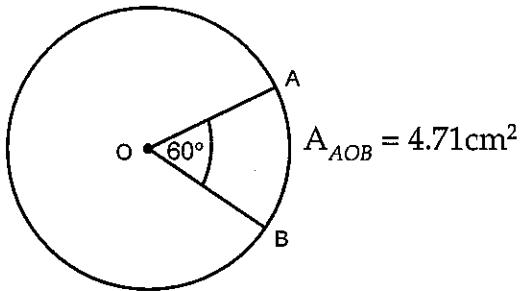


$$A_{top} = 37.68 \text{ cm}^2$$

My Calculations

Skill Builder

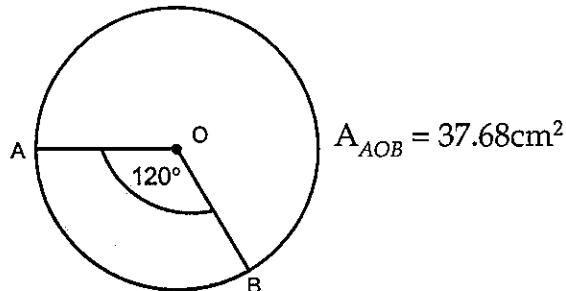
- 9** Given the circle and the information below, calculate the radius of the circle.



My Calculations

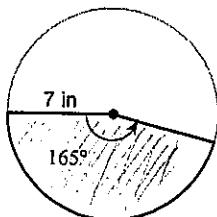
A large grid of 10 columns and 10 rows, designed for calculations or drawing.

- 10** Given the circle and the information below, calculate the radius of the circle.

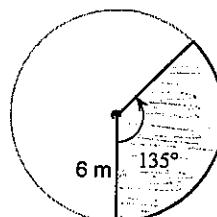


Assignment**Find the area of each sector.**

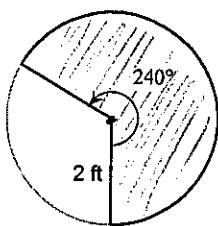
1)



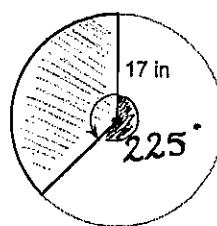
2)



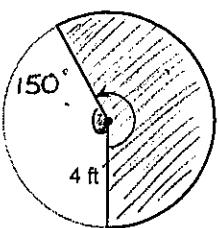
3)



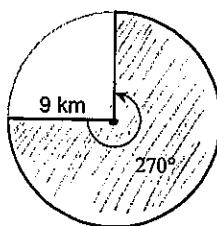
4)



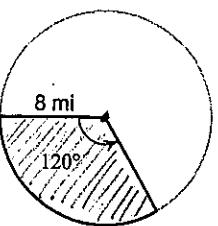
5)



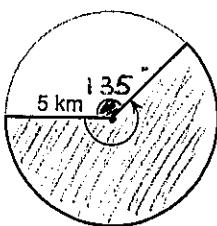
6)



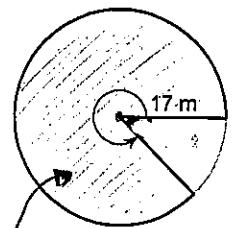
7)



8)

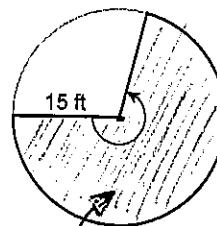


9)

area of
sector:

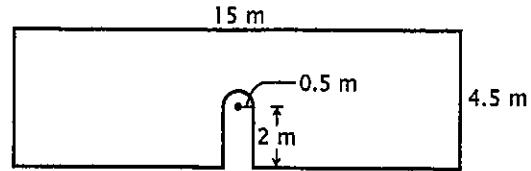
$$794.43 \text{ m}^2$$

10)

area of
sector:

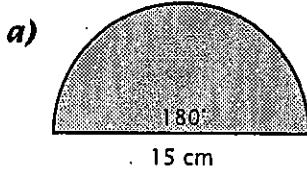
$$500.69 \text{ ft}^2$$

- 17.** This wall is to be painted. Calculate the surface to be painted if the radius of the semi-circle is 0.5 m.

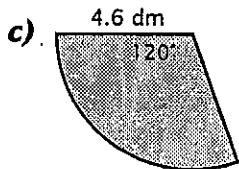


Area of a Sector

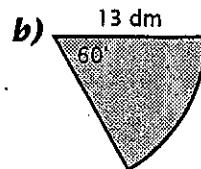
- 1.** Calculate the area of each sector ($\pi \approx 3.14$).



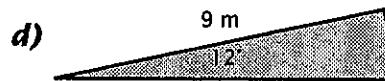
Area: _____



Area: _____



Area: _____



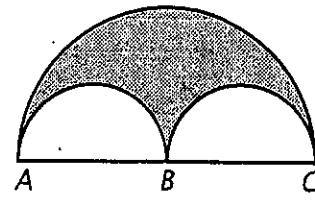
Area: _____

- 2.** A sector with a central angle of 30° has an area of 45 cm^2 . What is the area of the disc containing this sector? _____

- 3.** A disc has an area of 531 cm^2 . What is the area of a sector with a central angle of 80° ? _____

- 4.** A 4.6 cm windshield wiper clears the windshield by moving through an angle of 115° . What is the area of the wiped surface? _____

- 5.** Calculate the area of the shaded part of this figure, if \overline{AB} , \overline{DC} and \overline{AC} are diameters and if $m \overarc{AC} = 24 \text{ cm}$.



- 6.** A circle has a radius of 21 cm. A central angle intercepts an arc of 11 cm on this circle. What is the area of the sector corresponding to this central angle? _____

- 7.** A central angle of 45° intercepts an arc measuring 14.14 cm. What is the area of the sector corresponding to this central angle? _____

15 Word Problems for Circles

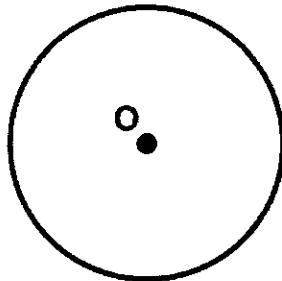
Putting it all Together

EVALUATED

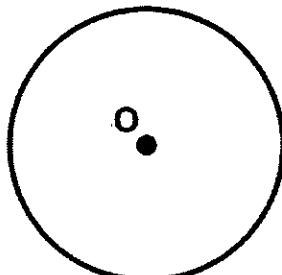


Skill Builder

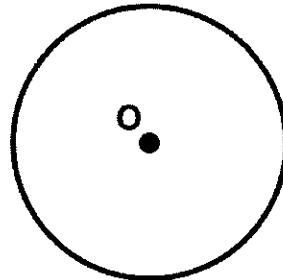
- 1** Given that the circumference of the circle below is 12.56cm, what is the circle's area?



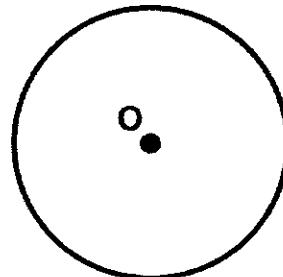
- 2** Given that the circumference of the circle below is 43.96cm, what is the circle's area?



- 3** Given that the area of the circle below is 50.24cm^2 , what is the circle's circumference?

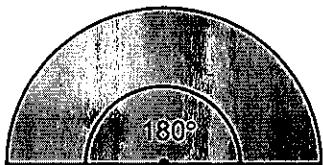


- 4** Given that the area of the circle below is 78.5cm^2 , what is the circle's circumference?



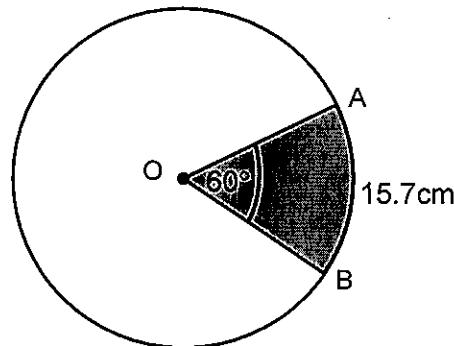
Skill Builder

- 5 Given that the area of the shape below is 157cm^2 , what is the shape's perimeter?



My Calculations

- 7 Given that $m\widehat{AB} = 15.7\text{cm}$, calculate the area of the circular sector AOB.



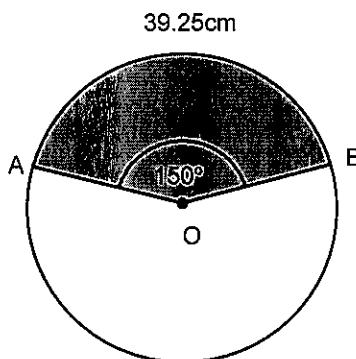
My Calculations

- 6 Given that the area of the shape below is 84.78cm^2 , what is the shape's perimeter?

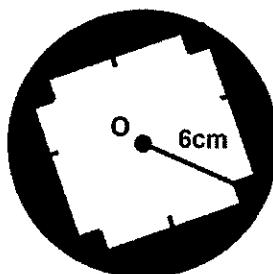


My Calculations

- 8** Given that $\widehat{mAB} = 39.25\text{cm}$, calculate the area of the circular sector AOB.



- 9** Calculate the area of the shaded region in the shape below.



- 10** Calculate the area of the shaded region in the shape below.

