

Name: _____

Formula:

Circumference of a circle =

Arc Length =

- 1) In a circle whose radius is 15, find the length of an arc, in terms of π , which contains 30° .
- 2) In a circle whose radius is 15, find the length of an arc, in terms of π , which contains 60° .
- 3) In a circle whose radius is 15, find the length of an arc, in terms of π , which contains 90° .
- 4) Find the circumference of a circle if the length of an arc of the circle that contains 45° is 2 cm.
- 5) Find the circumference of a circle if the length of an arc of the circle that contains 36° is 2 cm.
- 6) Find the circumference of a circle if the length of an arc of the circle that contains 72° is 2 cm.
- 7) Find the radius of a circle in which an arc that contains 270° has a length of 18π .
- 8) Find the radius of a circle in which an arc that contains 120° has a length of 4π .
- 9) Find the radius of a circle in which an arc that contains 60° has a length of 3π .
- 10) In a circle whose circumference is 18 cm, find the measure of a central angle of an arc whose length is 6 cm.
- 11) In a circle whose circumference is 18 cm, find the measure of a central angle of an arc whose length is 2 cm.
- 12) In a circle whose circumference is 18 cm, find the measure of a central angle of an arc whose length is 4.5 cm.

Formulas:

Area of a circle =

Area of the shaded =

Area of a sector =

Area of a segment



13) What is the area of a circle whose diameter is 10?

- A) 10π C) 20π
 B) 100π D) 25π

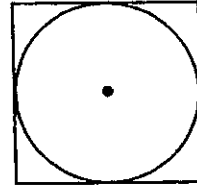
14) Find the area of a circle, in terms of π , whose circumference is 14π .15) Find the area of a circle, in terms of π , whose diameter is 12.16) The area of a circle is 25π . What is the length of a radius of the circle?17) The area of a circle is represented by 16π . What is the length of a diameter of the circle?

- A) 4 C) 8
 B) $4\sqrt{2}$ D) 16

18) The area of a circle is 36π . What is the length of the diameter of the circle?

- A) 6 C) 36
 B) 12 D) $6\sqrt{2}$

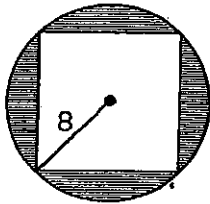
Questions 19 and 20 refer to the following:

19) Find the area of a circle, in terms of π , inscribed in a square whose side is 14.20) Find the area of a circle, in terms of π , inscribed in a square whose side is 10.21) If the area of a circle is 60, find the area of a sector whose central angle contains 30° .22) In a circle whose radius is 10, find the area of a sector, in terms of π , whose center angle contains 72° .

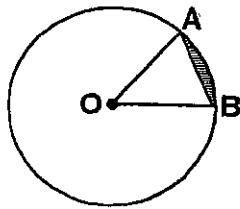
- 23) Find the radius of a circle in which a sector whose central angle is 40° has an area of 16π .

- 24) In a circle whose radius is 6, find the measure of the central angle of a sector whose area is 4π .

- 25) Find the area of the shaded region of the figure in terms of π .

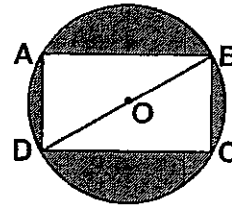


- 26) In circle O below, central angle AOB contains 60° and chord AB is drawn.



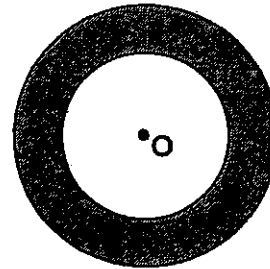
If $OA = 12$, find the area of minor segment AB in terms of π .

- 27) In rectangle ABCD, the ratio of $AB:BC$ is $4:3$. The perimeter of the rectangle is 56 centimeters.



- Find AB.
- Find BD.
- Express, in terms of π , the area of circle O.
- Express, in terms of π , the area of the shaded region.

- 28) In the accompanying diagram, both circles have the same center O. The radii of the circles are 3 and 5.



- Find, in terms of π , the area of the shaded region.
- What percent of the diagram is unshaded?
- A dart is thrown and lands on the diagram. Find the probability that the dart will land on the
 - shaded area
 - unshaded area

