

# SAT Prep

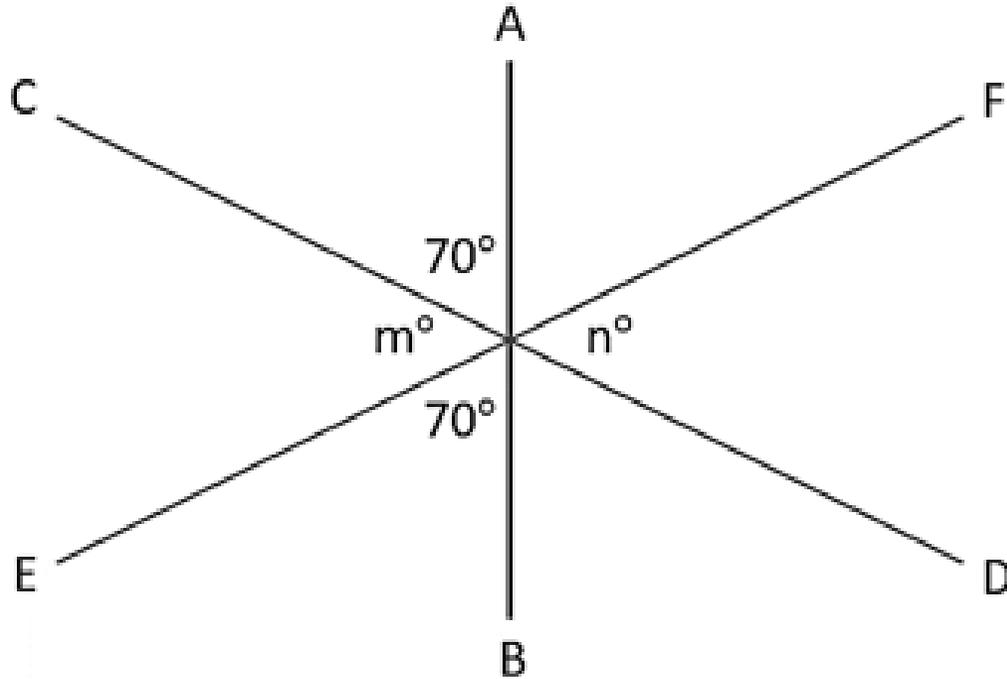
## Geometry & Trigonometry 1



# CONCEPTS

# QUESTIONS

1.

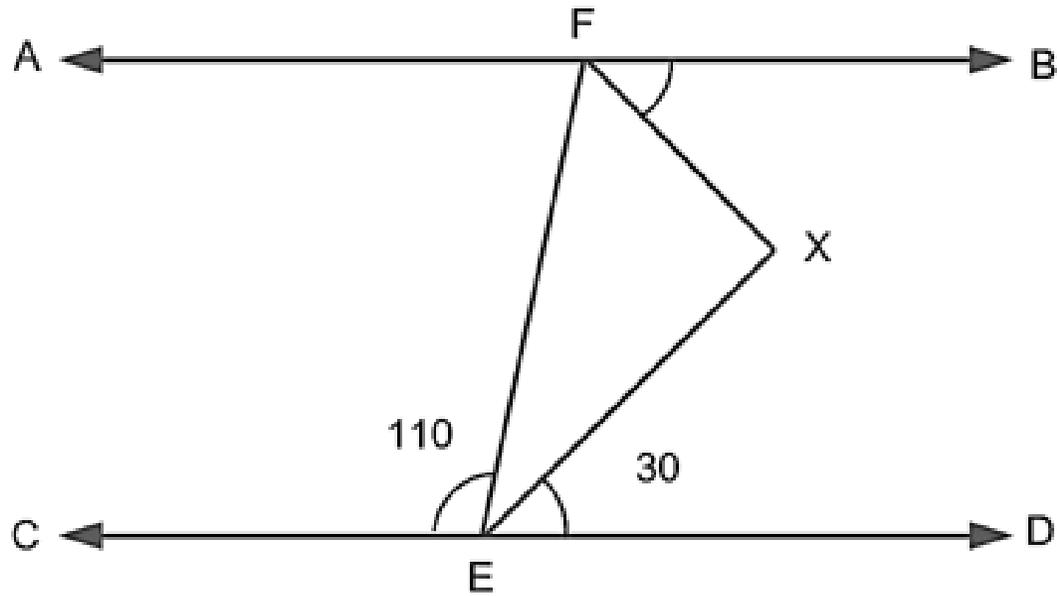


In the figure above, AB, CD, and EF all intersect. What is the value of  $n$ ?

- A. 30
- B. 40
- C. 50
- D. 60

# QUESTIONS

2.



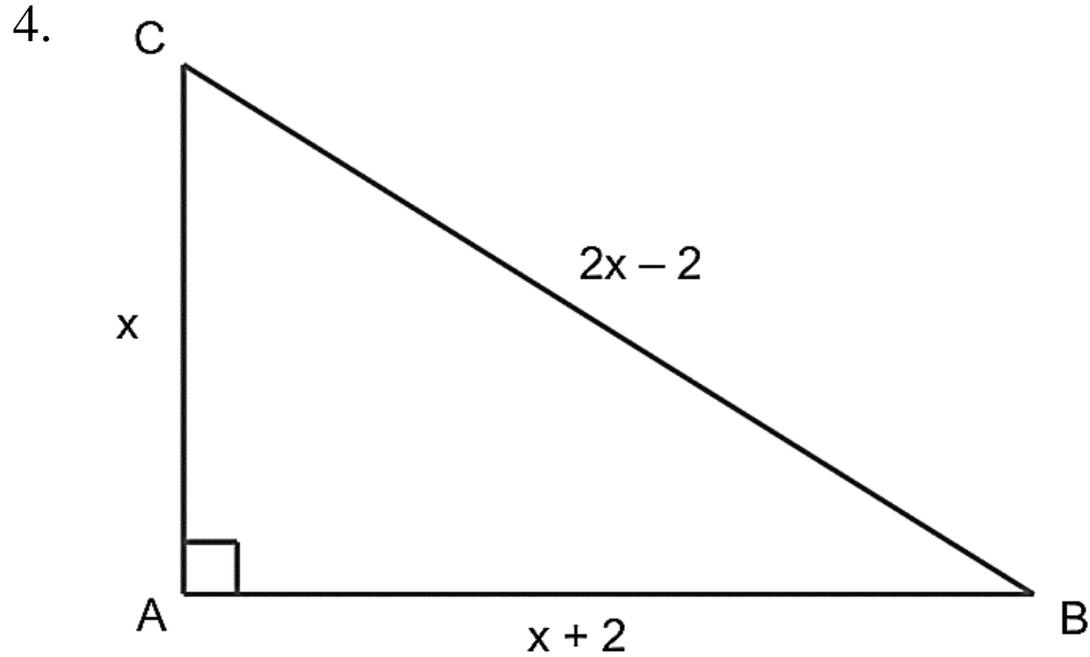
In the given figure if  $AB \parallel CD$  and angle  $BFX = 50^\circ$ , then what is angle  $FXE$ .

# QUESTIONS

3. The angles of a triangle is in the ratio 2:3:4. What is the degree measure of the largest angle?
- A. 40
  - B. 80
  - C. 90
  - D. 120



# QUESTIONS



In the given figure , what is the value of  $x$ ?

A.  $2\sqrt{6}$

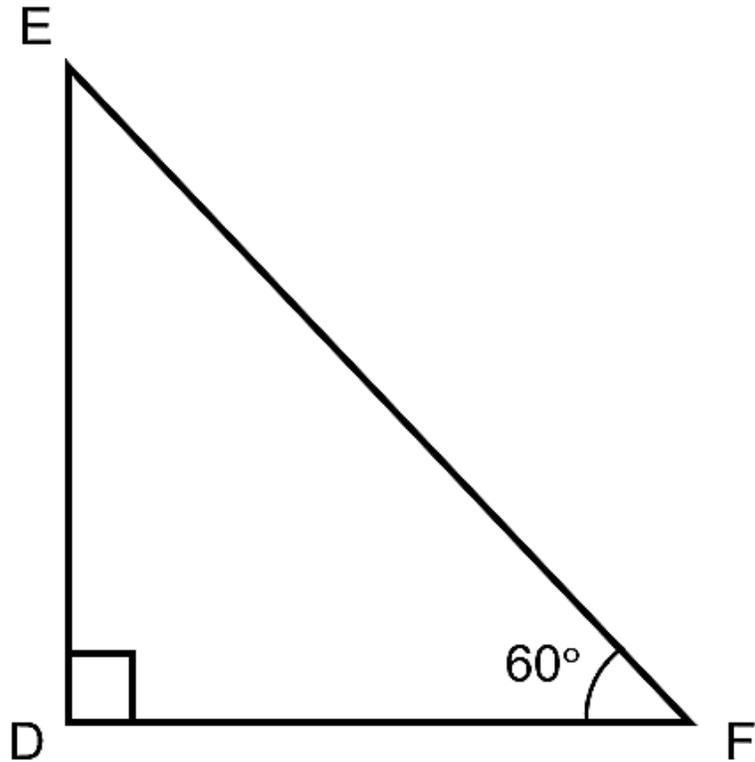
B. 6

C.  $6\sqrt{2}$

D. 8

# QUESTIONS

5.

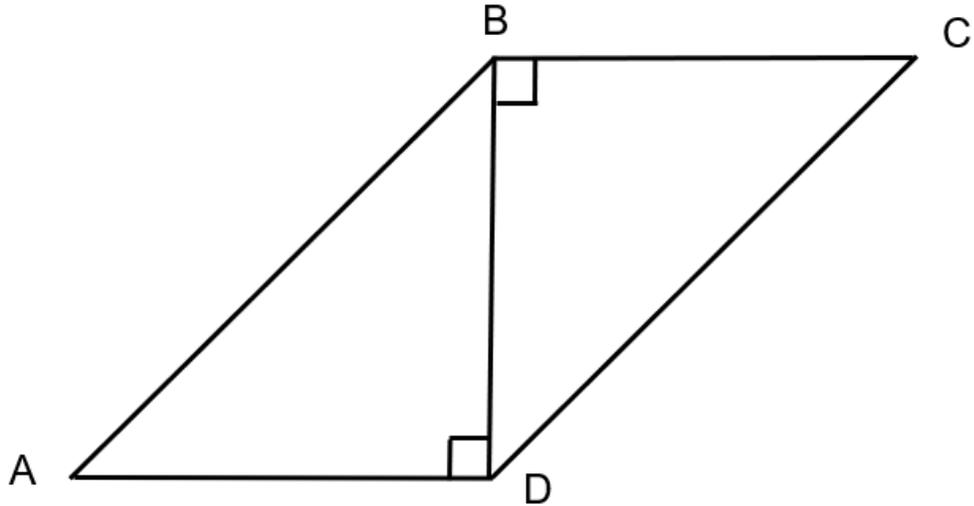


The area of triangle DEF is  $32\sqrt{3}$  square units. What is the length of DF?

- A. 8
- B.  $8\sqrt{3}$
- C. 16
- D.  $16\sqrt{3}$

# QUESTIONS

6.



If  $AD = 2CD$  and  $BD = BC = 6$ , what is the length of side  $AB$ ?

A.  $6\sqrt{2}$

B. 12

C.  $12\sqrt{2}$

D. 18

# QUESTIONS

7.

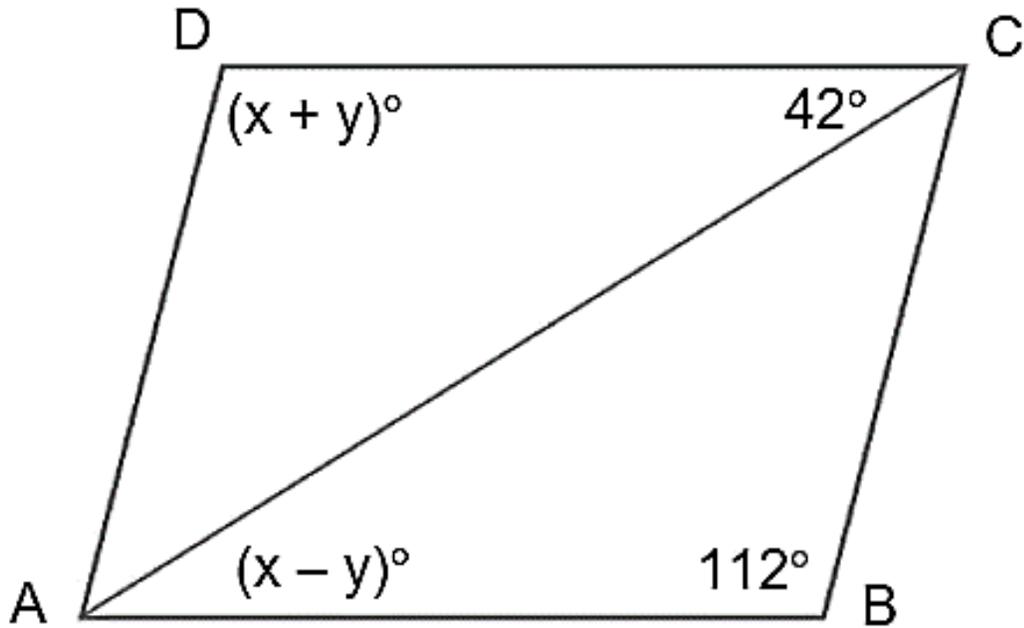
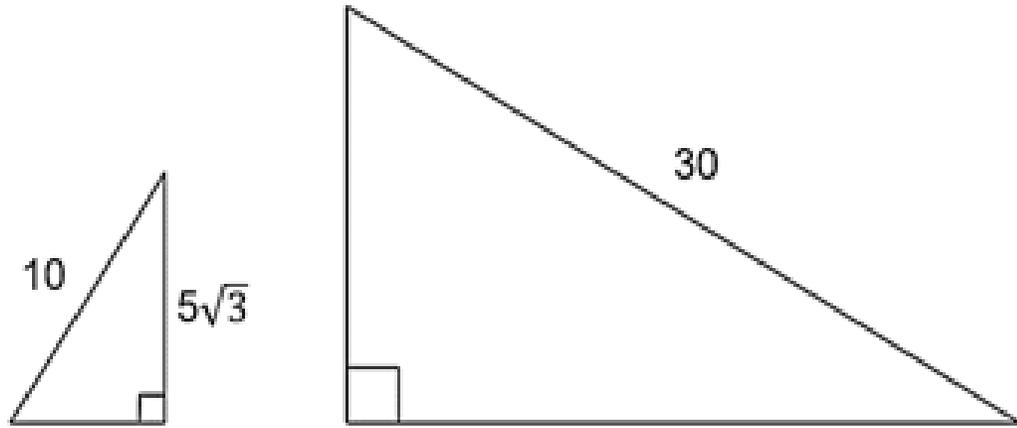


Figure ABCD is a parallelogram. What is the product  $xy$ ?

- A. 2,695
- B. 2,940
- C. 4,704
- D. 6,468

# QUESTIONS

8.

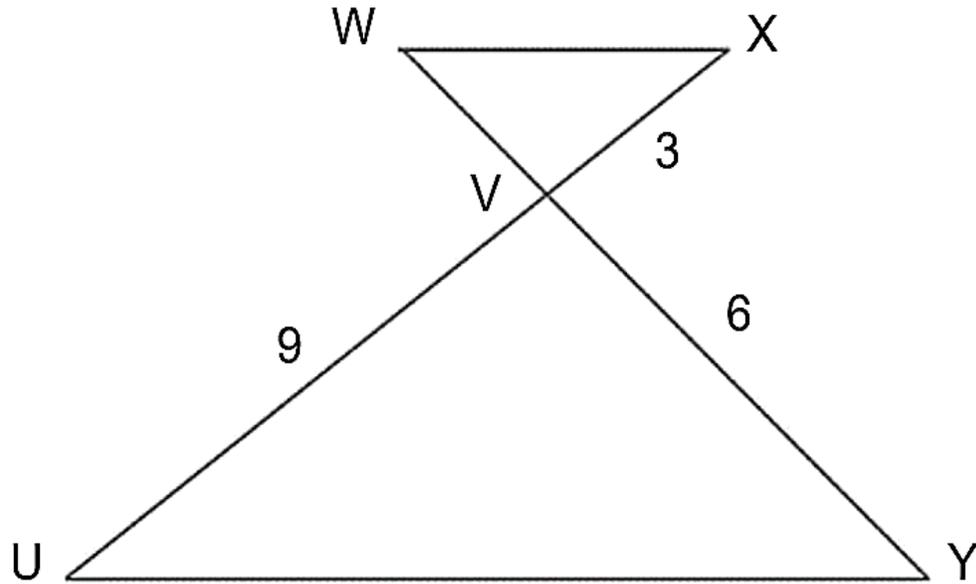


If the right triangles in the figure shown are similar triangles, what is the length of the shorter leg of the larger triangle?

- A. 10
- B. 15
- C.  $10\sqrt{3}$
- D.  $15\sqrt{3}$

# QUESTIONS

9.



In the figure above,  $UY$  and  $WX$  are parallel and  $UX$  intersects  $WY$  at  $V$ . What is the length of  $WY$ ?

- A. 8
- B. 9
- C. 10
- D. 12

# QUESTIONS

10. What is the ratio of the measure of an angle of a regular octagon to the measure of its exterior angle?

A.  $\frac{1}{1}$

B.  $\frac{2}{1}$

C.  $\frac{3}{1}$

D.  $\frac{5}{4}$



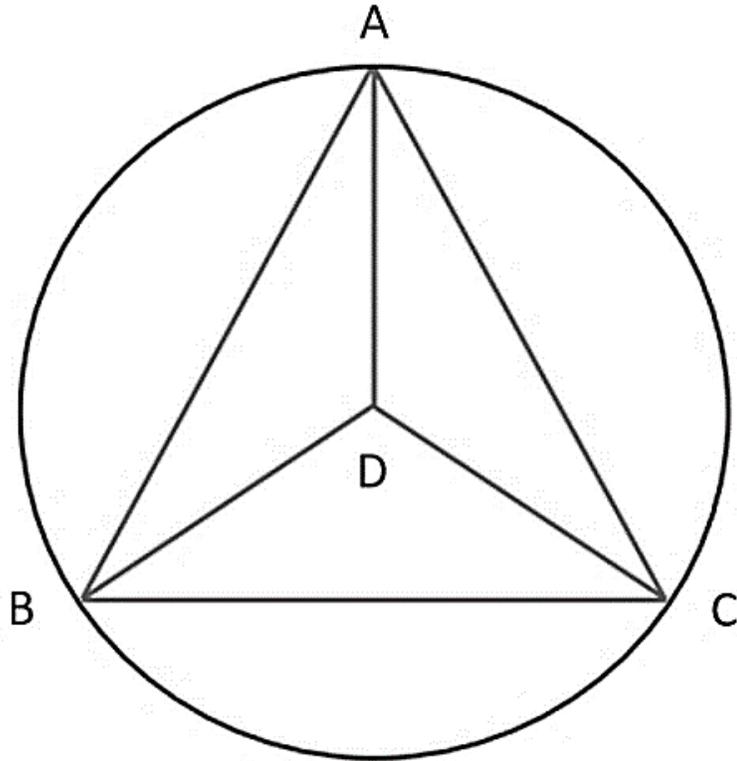
# QUESTIONS

11. If a smaller circle touches a longer circle internally and passes through the centre of the larger circle and the area of the smaller circle is  $200 \text{ cm}^2$ , find the area of the larger circle in sq. cm?
- A. 400
  - B. 200
  - C. 800
  - D. 1600



# QUESTIONS

12.



In the above figure, D is the centre of the circle. If angle DBC is 25 degrees, then what is angle BAC?

A.  $130^\circ$

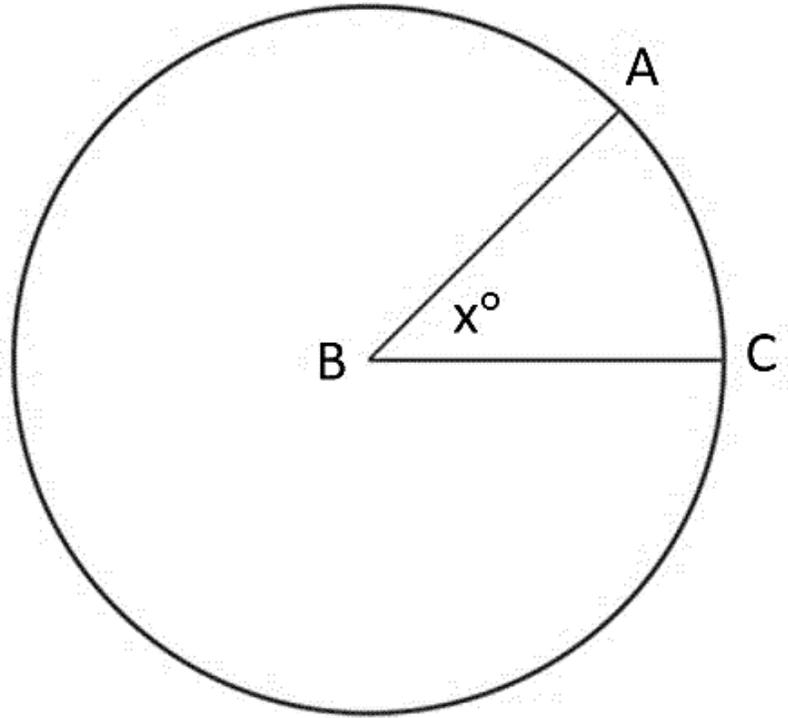
B.  $60^\circ$

C.  $120^\circ$

D.  $65^\circ$

# QUESTIONS

13.

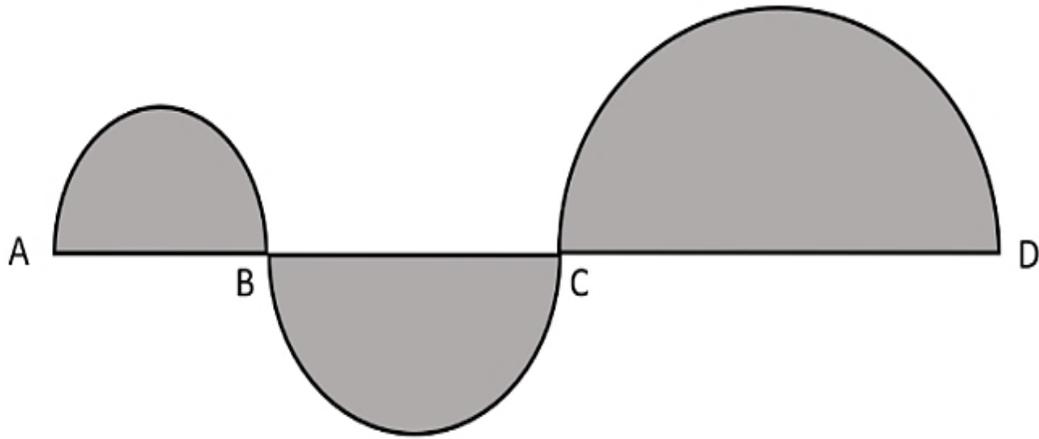


In the figure above, the ratio of the circumference of circle B to the length of minor arc AC is 8:1. What is the value of  $x$ ?

- A. 30
- B. 45
- C. 60
- D. 90

# QUESTIONS

14.



Each of the three shaded regions above is a semicircle. If  $AB = 4$ ,  $BC = 2AB$  and  $CD = 2BC$ , what is the area of the entire shaded region?

A.  $28\pi$

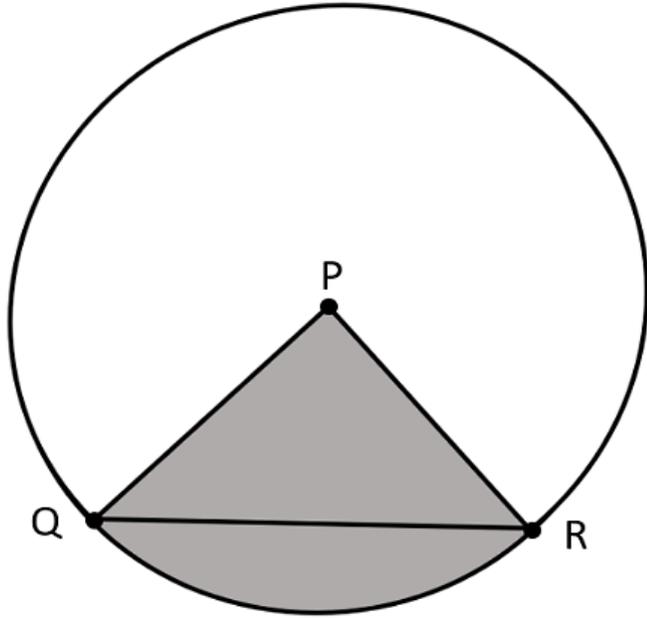
B.  $42\pi$

C.  $84\pi$

D.  $96\pi$

# QUESTIONS

15.

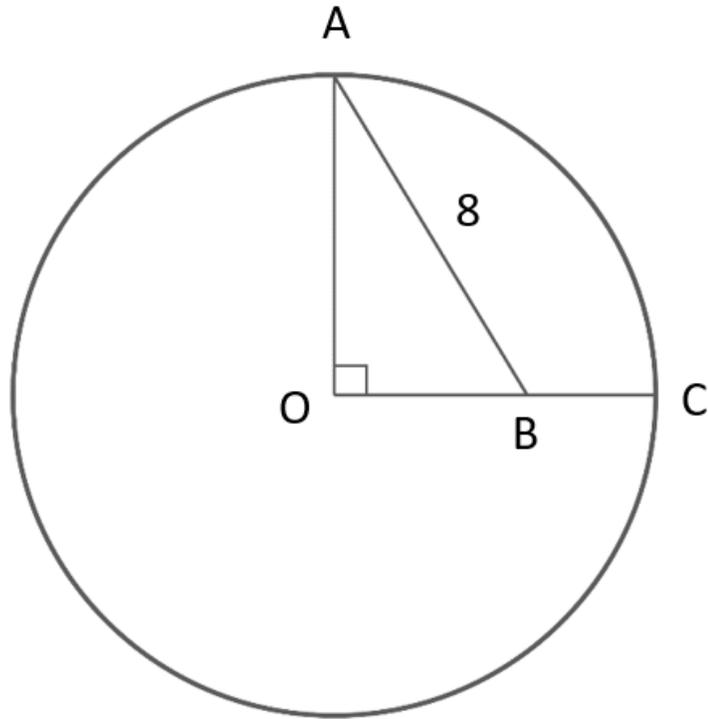


The area of the shaded sector in circle P above is  $18\pi$  square units. If angle PQR is  $45^\circ$ , what is the length of chord QR?

- A. 6
- B. 9
- C.  $9\sqrt{2}$
- D. 12

# QUESTIONS

16.



In the figure above, circle  $O$  has a circumference of  $12\pi$ . If  $AB = 8$ , what is  $BC$ ?

- A.  $2\sqrt{7}$
- B.  $2(3 - \sqrt{7})$
- C.  $2(6 - \sqrt{7})$
- D.  $4\sqrt{5}$



*Thank you*