

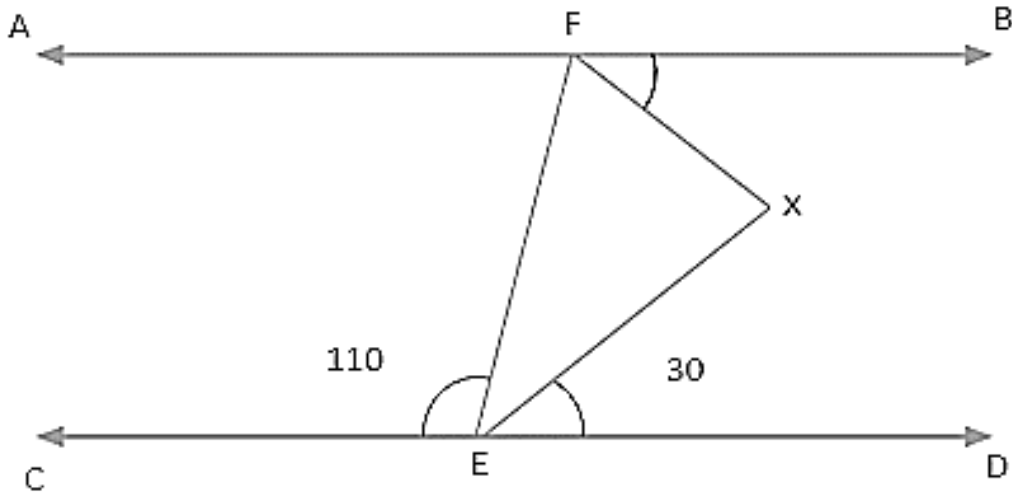
# GRE Prep

## Geometry



# Geometry

1.



In the given figure above, If  $AB \parallel CD$  and angle  $BFX = 50$ , then what is the degree  $m\angle FXE$ ?

# Geometry

2. If the angles of a pentagon take in order are in the ratio 4:8:6:4:5, what is the value of the largest angle (in degree) ?

# Geometry

3. What is the area (in  $\text{cm}^2$ ) of a regular hexagon with a side of 2 cm?

- A.  $3\sqrt{3}$
- B.  $4\sqrt{3}$
- C.  $6\sqrt{3}$
- D.  $8\sqrt{3}$
- E.  $10\sqrt{3}$



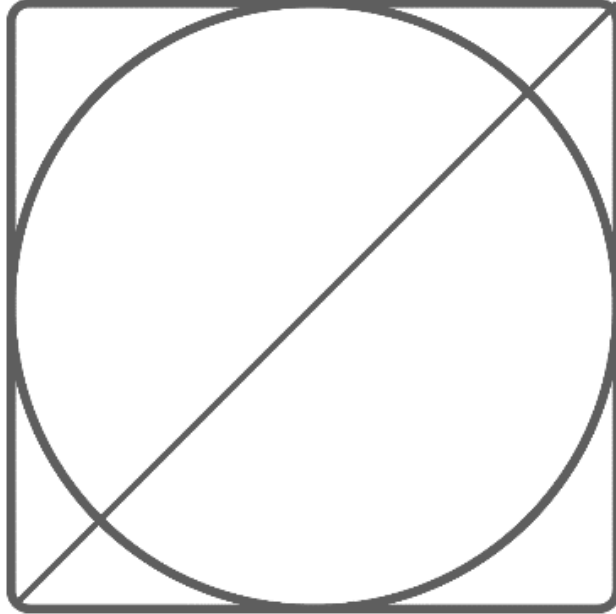
# Geometry

4. A smaller circle touches a longer circle internally and passes through the center of the larger circle. If the area of the smaller circle is  $200\text{cm}^2$ , what is the area of the larger circle in sq.cm?



# Geometry

5.



The length of the diagonal of a square is  $16\sqrt{2}$  and the diagonal passes through the centre of the circle. What is the area of the circle?

- A.  $64\pi$
- B.  $32\pi$
- C.  $20\pi$
- D.  $16\pi$
- E.  $8\pi$

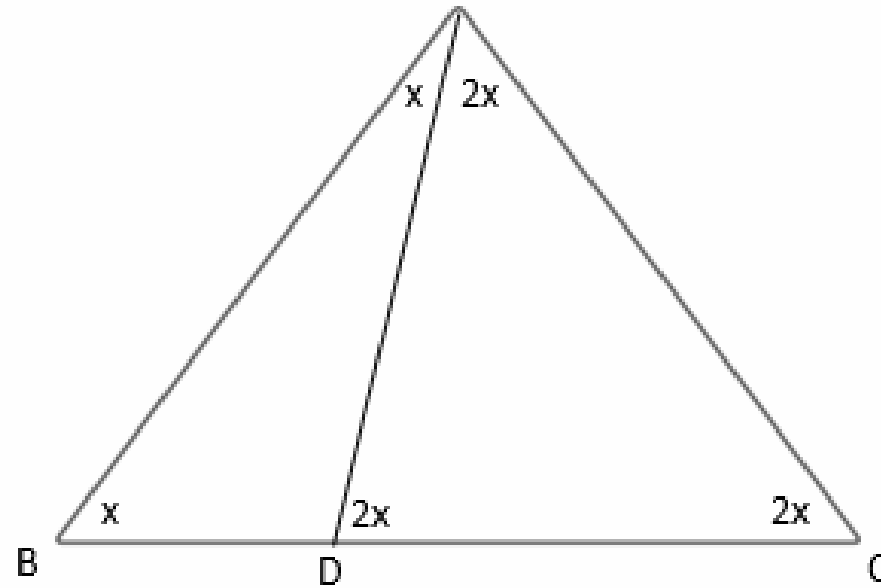
# Geometry

6. Which of the following cannot be the area of a quadrilateral with a perimeter of 24?
- A. 1
  - B. 20
  - C. 24
  - D. 36
  - E. 37



# Geometry

7.



**Quantity A**

Area of  $\triangle ABD$

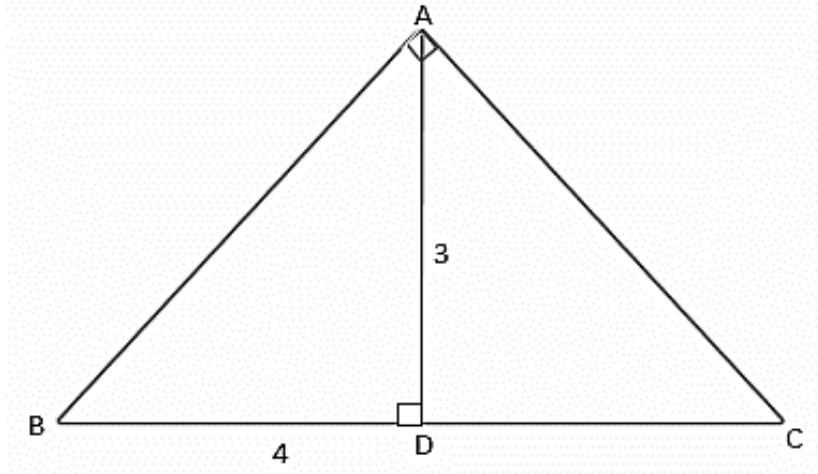
**Quantity B**

Area of  $\triangle ADC$



# Geometry

8.



What is the length of  $CD$  in the figure drawn above?

# Geometry

9. The hypotenuse of the isosceles right-angled triangle and diagonal of a square are equal in length.

**Quantity A**

Area of the square

**Quantity B**

2.5 times the area of the  
triangle



# Geometry

10. A company manufactures off road bicycle with front wheel of diameter 32 inches, and rear wheel of diameter 24 inches. On a particular race track, front wheel averaged 5 revolutions per second.

**Quantity A**

Average number of  
revolutions per minute for  
the rear wheel

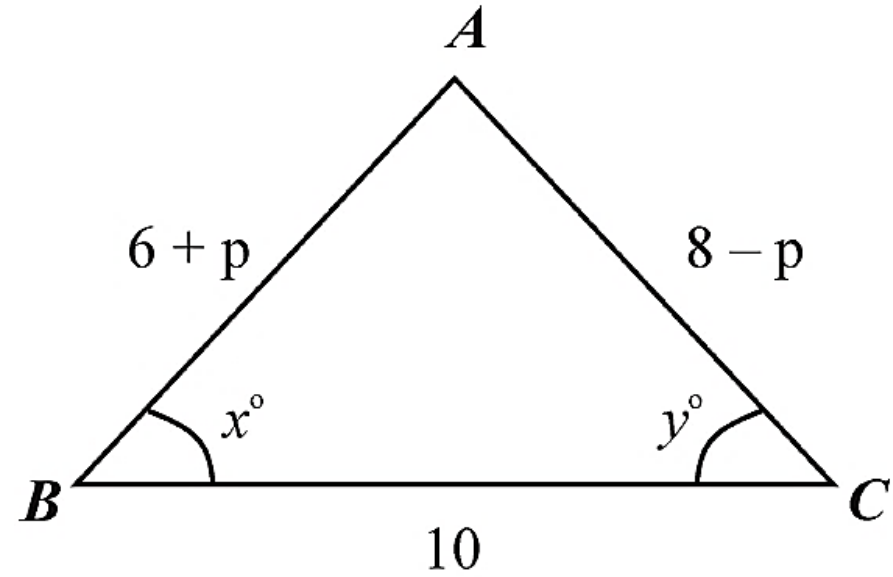
**Quantity B**

400



# Geometry

11.



Quantity A

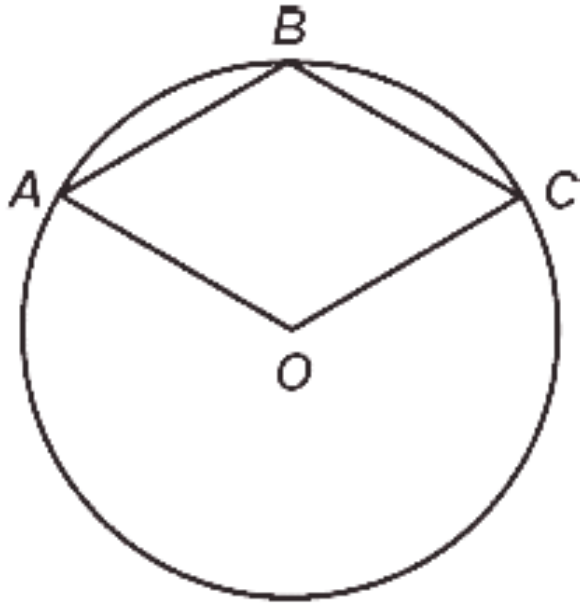
$x$

Quantity B

$y$

# Geometry

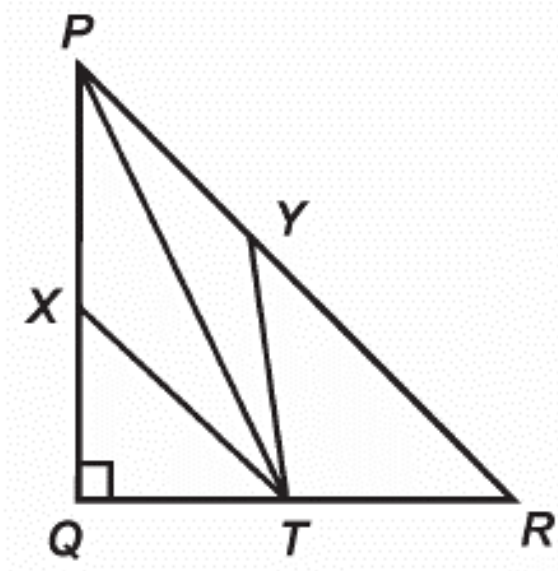
12.



In the figure above,  $O$  is the center of the circle. If angle  $ACO = 50^\circ$ , what is the degree measure of  $\angle ABC$ ?

# Geometry

13.



In right triangle PQR, X and Y are mid-points of PQ and PR respectively. T is any point on QR.  $PQ = 6$ ,  $QR = 8$ .

**Quantity A**

Area of  $\square PXTY$

**Quantity B**

12

# Geometry

14. The adjacent sides of a parallelogram are 6 and 8.

**Quantity A**

**Quantity B**

Area of parallelogram

50



# Geometry

15. A solid, cone-shaped lead crystal paperweight has a height of 5 centimeters and a base diameter that is 20% larger than the height. If the density of lead crystal is  $3.1 \text{ g/cm}^3$ , what is the approximate mass of the paperweight? Use  $\pi = 3.14$ . (Round your answer to the nearest gram.)





*Thank you*