

Objective: *to review properties of circles.*

Key Terms:

Radius:

Diameter:

Circumference:

Formula for the Circumference of a Circle: _____

Formula for the Area of a Circle: _____

Arc:

Chord:

- The longest chord is the diameter
- A chord can be shorter than the radius of a circle

Tangent line:

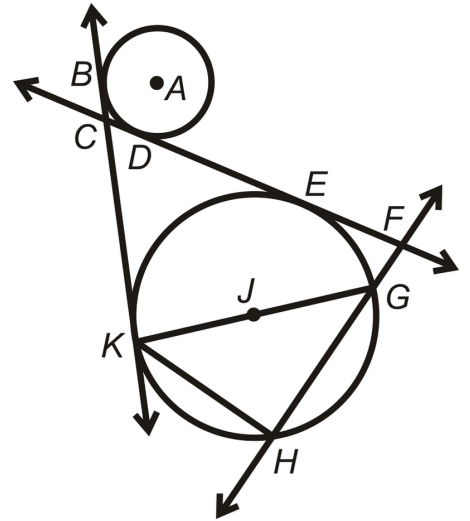
- The point of intersection is called the point of tangency
- The tangent line is perpendicular to the radius at the point of tangency

Secant:

Examples:

1. Using the correct notation, name each of the following based on the picture below:

- a. Two radii
- b. A diameter
- c. A chord that is not a diameter
- d. A secant line
- e. A point of tangency



Stretch Questions: Find the following and include a reason why.

- a. $m\angle KHG$
- b. $m\angle JKC$
- c. $m\widehat{KHE} + m\angle \widehat{KE}$

2. Given a circle with a radius of 5 determine the diameter, area, and circumference.

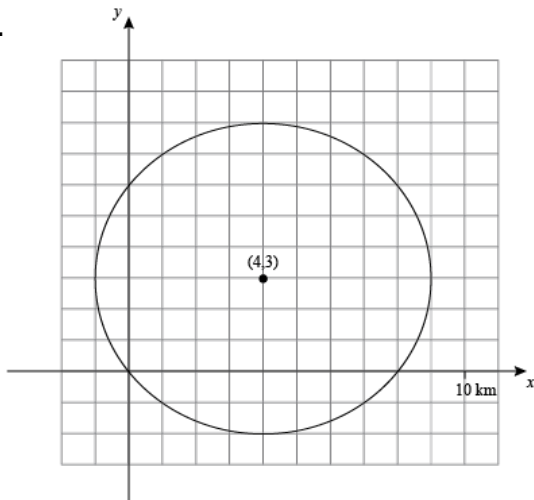
3. If the circumference of a circle is 24π , what is the length of the radius and area of the circle?

4. Determine which point(s) lie(s) on the circle: $x^2 + y^2 = 121$

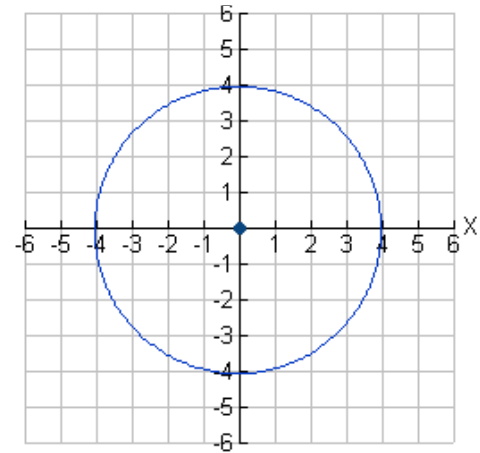
- a. (0,0)
- b. (3,2)
- c. (10,1)
- d. (0,-11)

5. Determine two points that lie on the circle:

a.



b.



6. Find two points that lie on the circle: $(x - 4)^2 + y^2 = 100$. How many could you find?

7. Which of the following is an equation for a line that is tangent to the circle $x^2 + y^2 = 53$ at the point $(7, 2)$? Sketch a picture to support your answer.

a. $y = -\frac{7}{2}x + \frac{45}{2}$

b. $y = -\frac{7}{2}x + \frac{53}{2}$

c. $y = \frac{7}{2}x - \frac{45}{2}$

d. $y = -\frac{7}{2}x - \frac{45}{2}$

