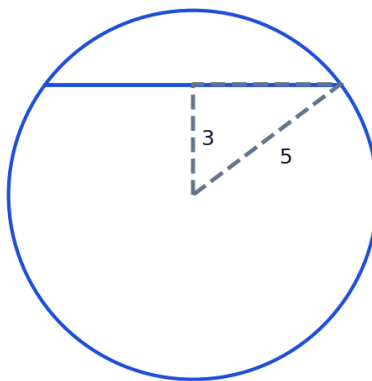


Problems | Name: _____

5.1 Chords, Arcs, and Angles

5.1.1. A circle of radius 5 has a horizontal chord 3 units above its center. Find the chord length.

Chord at a known distance from the center



Code Scholars Tutoring | codescholarstutoring.com

The perpendicular from the center bisects the chord.

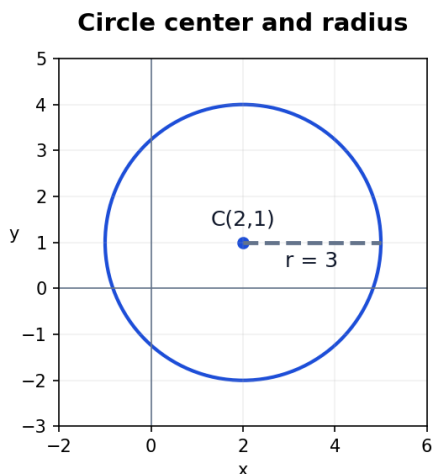
5.1.2. A tangent from P touches a radius-6 circle at T . If the center is 10 units from P , find PT .

5.1.3. An inscribed angle intercepts a semicircle. Find its measure.

Problems | Name: _____

5.2 Circle Equations

5.2.1. Write the equation of a circle with center $(2, 1)$ and radius 3.



Code Scholars Tutoring | codescholarstutoring.com

The center and radius determine the standard-form equation.

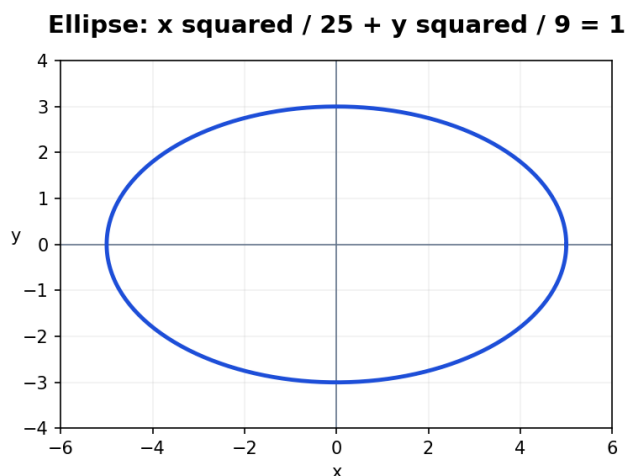
5.2.2. Does $(5, 1)$ lie on the circle $(x - 2)^2 + (y - 1)^2 = 9$?

5.2.3. A diameter has endpoints $(-2, 1)$ and $(4, 1)$. Write the circle equation.

Problems | Name: _____

5.3 Conic Sections

5.3.1. For $x^2/25 + y^2/9 = 1$, find the foci.



Code Scholars Tutoring | codescholarstutoring.com

The major axis is horizontal because 25 is the larger denominator.

5.3.2. Find the vertices and asymptotes of $x^2/9 - y^2/4 = 1$.

5.3.3. Explain why $x^2 + y^2 = -1$ has no real graph.