

Secret of Making Conic Sections Graphs Part 1 Circles and Ellipses

Lesson 133 | Algebra II | Circles, chords and equations • Conic sections

<https://www.youtube.com/watch?v=yFli-Z44MYw>

Original practice aligned to the saved video title.

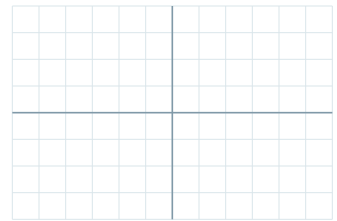
Name: _____ Date: _____ Show your reasoning.

01

Write the equation of a circle with center (3,7) and radius 10. Find its x-extremes and y-extremes.

02

For $(x-5)^2/81 + (y-14)^2/49 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**03**

Write the equation of a circle with center (-8,9) and radius 6. Find its x-extremes and y-extremes.

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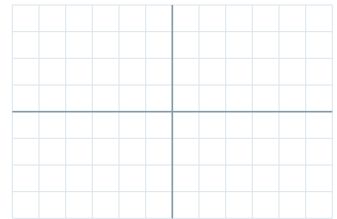
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Name: _____ Date: _____ Show your reasoning.

04

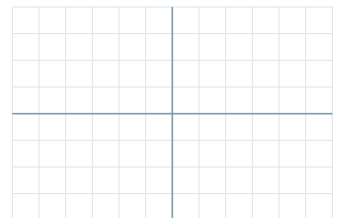
For $(x-8)^2/196 + (y-10)^2/121 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**05**

Write the equation of a circle with center $(-9,3)$ and radius 11. Find its x-extremes and y-extremes.

06

For $(x-4)^2/144 + (y-13)^2/25 = 1$, find the center, vertices, co-vertices, and foci; sketch.



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01

Write the equation of a circle with center (3,7) and radius 10. Find its x-extremes and y-extremes.

$(x-(3))^2+(y-7)^2=100$. Left/right: (-7,7), (13,7); bottom/top: (3,-3), (3,17).

02

For $(x-(5))^2/81 + (y-14)^2/49 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center (5,14); horizontal semimajor axis 9, semiminor axis 7. Vertices (-4,14),(14,14); co-vertices (5,7),(5,21); foci $(5 \pm \sqrt{32},14)$.

03

Write the equation of a circle with center (-8,9) and radius 6. Find its x-extremes and y-extremes.

$(x-(-8))^2+(y-9)^2=36$. Left/right: (-14,9), (-2,9); bottom/top: (-8,3), (-8,15).

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04

For $(x-8)^2/196 + (y-10)^2/121 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center (8,10); horizontal semimajor axis 14, semiminor axis 11. Vertices (-6,10),(22,10); co-vertices (8,-1),(8,21); foci $(8 \pm \sqrt{75}, 10)$.

05

Write the equation of a circle with center (-9,3) and radius 11. Find its x-extremes and y-extremes.

$(x-(-9))^2 + (y-3)^2 = 121$. Left/right: (-20,3), (2,3); bottom/top: (-9,-8), (-9,14).

06

For $(x-4)^2/144 + (y-13)^2/25 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center (4,13); horizontal semimajor axis 12, semiminor axis 5. Vertices (-8,13),(16,13); co-vertices (4,8),(4,18); foci $(4 \pm \sqrt{119}, 13)$.