

In Depth Analysis of Conic Section with Circles, Parabola and Ellipses

Lesson 136 | Algebra II | Circles, chords and equations • Conic sections

<https://www.youtube.com/watch?v=JcbE1aYv4EE>

Original practice aligned to the saved video title.

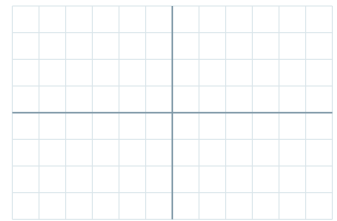
Name: _____ Date: _____ Show your reasoning.

01

Write the equation of a circle with center $(-8, 14)$ and radius 13. Find its x-extremes and y-extremes.

02

For $(x - (-3))^2/121 + (y - 2)^2/9 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**03**

Write the equation of a circle with center $(-8, 4)$ and radius 8. Find its x-extremes and y-extremes.

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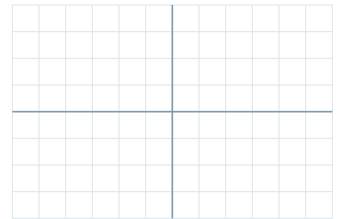
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Name: _____ Date: _____ Show your reasoning.

04

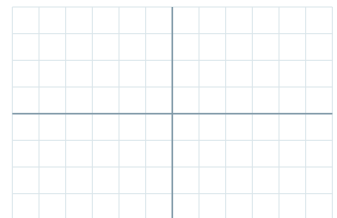
For $(x-(-9))^2/81 + (y-6)^2/16 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**05**

Write the equation of a circle with center $(-7,11)$ and radius 10. Find its x-extremes and y-extremes.

06

For $(x-(-5))^2/144 + (y-3)^2/81 = 1$, find the center, vertices, co-vertices, and foci; sketch.



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01

Write the equation of a circle with center $(-8,14)$ and radius 13. Find its x-extremes and y-extremes.

$(x-(-8))^2+(y-14)^2=169$. Left/right: $(-21,14)$, $(5,14)$; bottom/top: $(-8,1)$, $(-8,27)$.

02

For $(x-(-3))^2/121 + (y-2)^2/9 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center $(-3,2)$; horizontal semimajor axis 11, semiminor axis 3. Vertices $(-14,2)$, $(8,2)$; co-vertices $(-3,-1)$, $(-3,5)$; foci $(-3 \pm \sqrt{112}, 2)$.

03

Write the equation of a circle with center $(-8,4)$ and radius 8. Find its x-extremes and y-extremes.

$(x-(-8))^2+(y-4)^2=64$. Left/right: $(-16,4)$, $(0,4)$; bottom/top: $(-8,-4)$, $(-8,12)$.

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04

For $(x-(-9))^2/81 + (y-6)^2/16 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center $(-9,6)$; horizontal semimajor axis 9, semiminor axis 4. Vertices $(-18,6),(0,6)$; co-vertices $(-9,2),(-9,10)$; foci $(-9 \pm \sqrt{65},6)$.

05

Write the equation of a circle with center $(-7,11)$ and radius 10. Find its x-extremes and y-extremes.

$(x-(-7))^2 + (y-11)^2 = 100$. Left/right: $(-17,11), (3,11)$; bottom/top: $(-7,1), (-7,21)$.

06

For $(x-(-5))^2/144 + (y-3)^2/81 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center $(-5,3)$; horizontal semimajor axis 12, semiminor axis 9. Vertices $(-17,3),(7,3)$; co-vertices $(-5,-6),(-5,12)$; foci $(-5 \pm \sqrt{63},3)$.