

Summer Geometry Semester 2 Unit 2 Conic Section

Lesson 022 | Geometry | Circles, chords and equations • Conic sections

<https://www.youtube.com/watch?v=FVCg3ZlzpOo>

Original practice aligned to the saved video title.

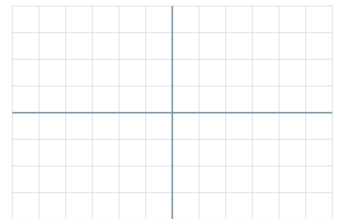
Name: _____ Date: _____ Show your reasoning.

01

Write the equation of a circle with center (0,14) and radius 2. Find its x-extremes and y-extremes.

02

For $(x-6)^2/121 + (y-13)^2/81 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**03**

Write the equation of a circle with center (1,8) and radius 12. Find its x-extremes and y-extremes.

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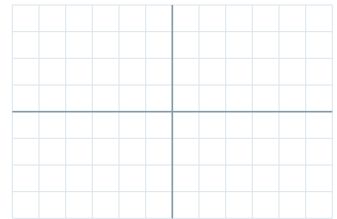
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Name: _____ Date: _____ Show your reasoning.

04

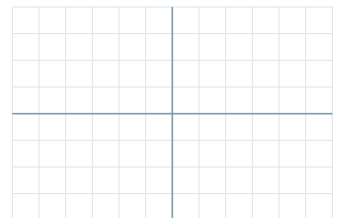
For $(x-(-5))^2/81 + (y-13)^2/36 = 1$, find the center, vertices, co-vertices, and foci; sketch.

**05**

Write the equation of a circle with center (9,11) and radius 7. Find its x-extremes and y-extremes.

06

For $(x-(-8))^2/169 + (y-6)^2/9 = 1$, find the center, vertices, co-vertices, and foci; sketch.



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01

Write the equation of a circle with center (0,14) and radius 2. Find its x-extremes and y-extremes.

$(x-0)^2 + (y-14)^2 = 4$. Left/right: (-2,14), (2,14); bottom/top: (0,12), (0,16).

02

For $(x-6)^2/121 + (y-13)^2/81 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center (6,13); horizontal semimajor axis 11, semiminor axis 9. Vertices (-5,13), (17,13); co-vertices (6,4), (6,22); foci $(6 \pm \sqrt{40}, 13)$.

03

Write the equation of a circle with center (1,8) and radius 12. Find its x-extremes and y-extremes.

$(x-1)^2 + (y-8)^2 = 144$. Left/right: (-11,8), (13,8); bottom/top: (1,-4), (1,20).

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04

For $(x-(-5))^2/81 + (y-13)^2/36 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center $(-5,13)$; horizontal semimajor axis 9, semiminor axis 6. Vertices $(-14,13), (4,13)$; co-vertices $(-5,7), (-5,19)$; foci $(-5 \pm \sqrt{45}, 13)$.

05

Write the equation of a circle with center $(9,11)$ and radius 7. Find its x-extremes and y-extremes.

$(x-(9))^2 + (y-11)^2 = 49$. Left/right: $(2,11), (16,11)$; bottom/top: $(9,4), (9,18)$.

06

For $(x-(-8))^2/169 + (y-6)^2/9 = 1$, find the center, vertices, co-vertices, and foci; sketch.

Center $(-8,6)$; horizontal semimajor axis 13, semiminor axis 3. Vertices $(-21,6), (5,6)$; co-vertices $(-8,3), (-8,9)$; foci $(-8 \pm \sqrt{160}, 6)$.