

Name : _____

Score : _____

Teacher : _____

Date : _____

Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

1) Foci: $(2 + 3\sqrt{3}, 0)$, $(2 - 3\sqrt{3}, 0)$
Major Axis Endpoints: $(8, 0)$, $(-4, 0)$

6) Center: $(-7, -5)$, Vertex: $(-7, 1)$
Focus: $(-7, -5 + 2\sqrt{5})$

2) Vertices : $(16, -2)$, $(-2, -2)$
Co-vertices: $(7, 6)$, $(7, -10)$

7) Center: $(-7, -3)$, Width: 6
Focus: $(-7, -3 + \sqrt{7})$

3) Vertices : $(-3, 12)$, $(-3, -10)$
Co-vertices: $(2, 1)$, $(-8, 1)$

8) Foci: $(-7 + 3\sqrt{7}, -1)$, $(-7 - 3\sqrt{7}, -1)$
Co-vertices: $(-7, 8)$, $(-7, -10)$

4) Foci: $(-6, 4 + 2\sqrt{7})$, $(-6, 4 - 2\sqrt{7})$
Co-vertices: $(0, 4)$, $(-12, 4)$

9) Center: $(0, 2)$, Vertex: $(7, 2)$
Focus: $(2\sqrt{6}, 2)$

5) Foci: $(-4, 4 + \sqrt{39})$, $(-4, 4 - \sqrt{39})$
Minor Axis Endpoints: $(1, 4)$, $(-9, 4)$

10) Center: $(0, -8)$, Co-vertex: $(0, -5)$
Focus: $(6\sqrt{2}, -8)$



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Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

- 1) Foci: $(2 + 3\sqrt{3}, 0)$, $(2 - 3\sqrt{3}, 0)$
Major Axis Endpoints: $(8, 0)$, $(-4, 0)$

$$\frac{(x - 2)^2}{36} + \frac{y^2}{9} = 1$$

- 6) Center: $(-7, -5)$, Vertex: $(-7, 1)$
Focus: $(-7, -5 + 2\sqrt{5})$

$$\frac{(x + 7)^2}{16} + \frac{(y + 5)^2}{36} = 1$$

- 2) Vertices : $(16, -2)$, $(-2, -2)$
Co-vertices: $(7, 6)$, $(7, -10)$

$$\frac{(x - 7)^2}{81} + \frac{(y + 2)^2}{64} = 1$$

- 7) Center: $(-7, -3)$, Width: 6
Focus: $(-7, -3 + \sqrt{7})$

$$\frac{(x + 7)^2}{9} + \frac{(y + 3)^2}{16} = 1$$

- 3) Vertices : $(-3, 12)$, $(-3, -10)$
Co-vertices: $(2, 1)$, $(-8, 1)$

$$\frac{(x + 3)^2}{25} + \frac{(y - 1)^2}{121} = 1$$

- 8) Foci: $(-7 + 3\sqrt{7}, -1)$, $(-7 - 3\sqrt{7}, -1)$
Co-vertices: $(-7, 8)$, $(-7, -10)$

$$\frac{(x + 7)^2}{144} + \frac{(y + 1)^2}{81} = 1$$

- 4) Foci: $(-6, 4 + 2\sqrt{7})$, $(-6, 4 - 2\sqrt{7})$
Co-vertices: $(0, 4)$, $(-12, 4)$

$$\frac{(x + 6)^2}{36} + \frac{(y - 4)^2}{64} = 1$$

- 9) Center: $(0, 2)$, Vertex: $(7, 2)$
Focus: $(2\sqrt{6}, 2)$

$$\frac{x^2}{49} + \frac{(y - 2)^2}{25} = 1$$

- 5) Foci: $(-4, 4 + \sqrt{39})$, $(-4, 4 - \sqrt{39})$
Minor Axis Endpoints: $(1, 4)$, $(-9, 4)$

$$\frac{(x + 4)^2}{25} + \frac{(y - 4)^2}{64} = 1$$

- 10) Center: $(0, -8)$, Co-vertex: $(0, -5)$
Focus: $(6\sqrt{2}, -8)$

$$\frac{x^2}{81} + \frac{(y + 8)^2}{9} = 1$$

