Name : _____ Score : _____

Teacher : _____ Date : _____

Writing Ellipses Equations

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

1) Foci: $(-4 , 1 + 2\sqrt{3})$, $(-4 , 1 - 2\sqrt{3})$
Minor Axis Endpoints: $(-2 , 1)$, $(-6 , 1)$

2) Vertices : $(0 , 1)$, $(0 , -13)$
Foci: $(0 , -6 + 4\sqrt{3})$, $(0 , -6 - 4\sqrt{3})$

3) Foci: $(-8 + 2\sqrt{5} , -7)$, $(-8 - 2\sqrt{5} , -7)$
Major Axis Endpoints: $(-2 , -7)$, $(-14 , -7)$

4) Center: $(8 , -1)$, Vertex: $(8 , 8)$
Focus: $(8 , -1 + \sqrt{65})$

5) Center: $(-3 , 2)$, Co-vertex: $(3 , 2)$
Focus: $(-3 , 2 + \sqrt{13})$

6) Center: $(3 , 6)$, Width: 12
Focus: $(3 + 4\sqrt{2} , 6)$

7) Vertices : $(5 , 0)$, $(5 , -6)$
Co-vertices: $(7 , -3)$, $(3 , -3)$

8) Center: $(0 , -5)$, Vertex: $(0 , 0)$
Focus: $(0 , -1)$

9) Center: $(8 , 3)$, Width: 2
Focus: $(8 , 3 + \sqrt{143})$

10) Center: $(7 , 6)$, Co-vertex: $(9 , 6)$
Focus: $(7 , 6 + 3\sqrt{5})$

Name : _____ Score : _____

Teacher : _____ Date : _____

Writing Ellipses Equations

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

1) Foci: $(-4 , 1 + 2\sqrt{3})$, $(-4 , 1 - 2\sqrt{3})$

Minor Axis Endpoints: $(-2 , 1)$, $(-6 , 1)$

$$\frac{(x + 4)^2}{4} + \frac{(y - 1)^2}{16} = 1$$

2) Vertices : $(0 , 1)$, $(0 , -13)$

Foci: $(0 , -6 + 4\sqrt{3})$, $(0 , -6 - 4\sqrt{3})$

$$\frac{x^2}{1} + \frac{(y + 6)^2}{49} = 1$$

3) Foci: $(-8 + 2\sqrt{5} , -7)$, $(-8 - 2\sqrt{5} , -7)$

Major Axis Endpoints: $(-2 , -7)$, $(-14 , -7)$

$$\frac{(x + 8)^2}{36} + \frac{(y + 7)^2}{16} = 1$$

4) Center: $(8 , -1)$, Vertex: $(8 , 8)$

Focus: $(8 , -1 + \sqrt{65})$

$$\frac{(x - 8)^2}{16} + \frac{(y + 1)^2}{81} = 1$$

5) Center: $(-3 , 2)$, Co-vertex: $(3 , 2)$

Focus: $(-3 , 2 + \sqrt{13})$

$$\frac{(x + 3)^2}{36} + \frac{(y - 2)^2}{49} = 1$$

6) Center: $(3 , 6)$, Width: 12

Focus: $(3 + 4\sqrt{2} , 6)$

$$\frac{(x - 3)^2}{36} + \frac{(y - 6)^2}{4} = 1$$

7) Vertices : $(5 , 0)$, $(5 , -6)$

Co-vertices: $(7 , -3)$, $(3 , -3)$

$$\frac{(x - 5)^2}{4} + \frac{(y + 3)^2}{9} = 1$$

8) Center: $(0 , -5)$, Vertex: $(0 , 0)$

Focus: $(0 , -1)$

$$\frac{x^2}{9} + \frac{(y + 5)^2}{25} = 1$$

9) Center: $(8 , 3)$, Width: 2

Focus: $(8 , 3 + \sqrt{143})$

$$\frac{(x - 8)^2}{1} + \frac{(y - 3)^2}{144} = 1$$

10) Center: $(7 , 6)$, Co-vertex: $(9 , 6)$

Focus: $(7 , 6 + 3\sqrt{5})$

$$\frac{(x - 7)^2}{4} + \frac{(y - 6)^2}{49} = 1$$