Name : _____ Score : _____

Teacher : _____ Date : _____

Properties of Ellipses

Identify the Center, Vertices, Co-Vertices, Foci, Major Axis Length, Minor Axis Length, and Eccentricity.

1) $\frac{(x + 5)^2}{36} + \frac{(y - 1)^2}{9} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

Foci =

Eccentricity =

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

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

Foci =

Eccentricity =

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

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

Foci =

Eccentricity =

4) $\frac{(x + 6)^2}{25} + \frac{y^2}{16} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

Foci =

Eccentricity =

Name : _____ Score : _____

Teacher : _____ Date : _____

Properties of Ellipses

Identify the Center, Vertices, Co-Vertices, Foci, Major Axis Length, Minor Axis Length, and Eccentricity.

1) $\frac{(x + 5)^2}{36} + \frac{(y - 1)^2}{9} = 1$

Center = (-5 , 1)

Vertices = (1 , 1) , (-11 , 1)

Co-vertices = (-5 , 4) , (-5 , -2)

Major Axis Length = 12 units

Minor Axis Length = 6 units

Foci = $(-5 + 3\sqrt{3}\ , 1)$, $(-5 - 3\sqrt{3}\ , 1)$

Eccentricity = $\frac{\sqrt{3}}{2}$

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

Center = (-4 , -2)

Vertices = (4 , -2) , (-12 , -2)

Co-vertices = (-4 , -1) , (-4 , -3)

Major Axis Length = 16 units

Minor Axis Length = 2 units

Foci = $(-4 + 3\sqrt{7}\ , -2)$, $(-4 - 3\sqrt{7}\ , -2)$

Eccentricity = $\frac{3\sqrt{7}}{8}$

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

Center = (6 , 0)

Vertices = (6 , 6) , (6 , -6)

Co-vertices = (7 , 0) , (5 , 0)

Major Axis Length = 12 units

Minor Axis Length = 2 units

Foci = $(6\ , \sqrt{35}\ )$, $(6\ , -\sqrt{35}\ )$

Eccentricity = $\frac{\sqrt{35}}{6}$

4) $\frac{(x + 6)^2}{25} + \frac{y^2}{16} = 1$

Center = (-6 , 0)

Vertices = (-1 , 0) , (-11 , 0)

Co-vertices = (-6 , 4) , (-6 , -4)

Major Axis Length = 10 units

Minor Axis Length = 8 units

Foci = (-3 , 0) , (-9 , 0)

Eccentricity = $\frac{3}{5}$