Class Discussion

Unit 9 Topic 2 Part 2 Ellipses and eccentricity

Objective: students will connect the concept of roundness of an ellipse to eccentricity

Define: Eccentricity

A ratio: $e = \frac{c}{a}$ $\qquad 1 > e > 0$

$e \to 1$, the ellipse looks more like a segment (of 2a in size)

$e \to 0$, the ellipse looks more like a circle

Ex1 Given $\frac{(x-2)^2}{24} + \frac{(y+1)^2}{36} = 1$

(1) graph the ellipse

(2) find characteristics

(3) evaluate eccentricity

Ex2 Find the standard for an ellipse with covertices at $(3,-2),(3,-6)$ and $e = \frac{2}{3}$