

Lesson 86- Ellipse Day 2.notebook

April 9, 2018

Lesson 86 Objective: SWBAT find the equation of an ellipse given features of it.

Kickoff

- Find the ellipse-practice worksheet from Thursday.
- Write everything that you recall about ellipses!

Apr 9-6:53 AM

Ellipses

- They are an oval shape.
- When a^2 is under x it's horizontal.
- When a^2 is under y it's vertical.
- a is length of major axis.
- b is length of minor axis.
- Two foci! found by: $a^2 = b^2 + c^2$

horizontal

$$\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$$

(h,k) Center

major axis
bigger

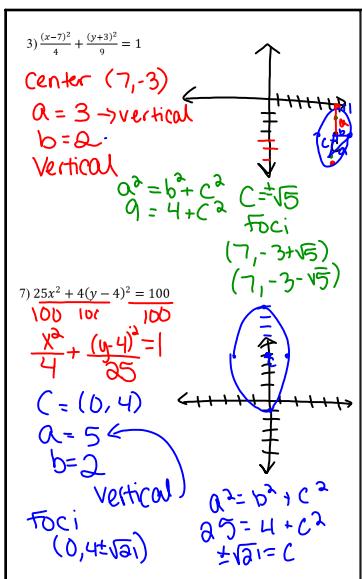
vertical

$$\frac{(x-h)^2}{b^2} + \frac{(y-k)^2}{a^2} = 1$$

(h,k) Center

minor axis
smaller

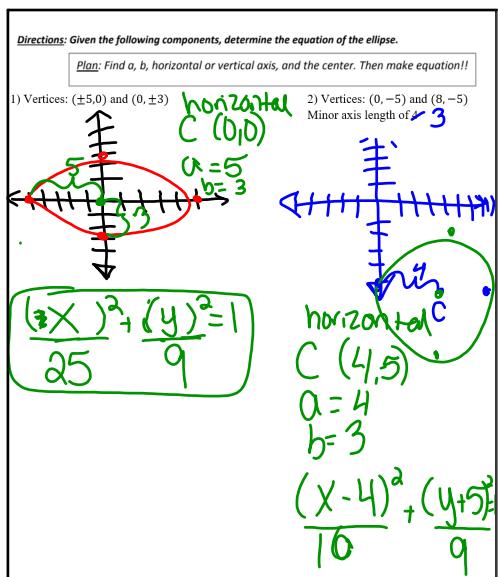
Apr 9-7:12 AM



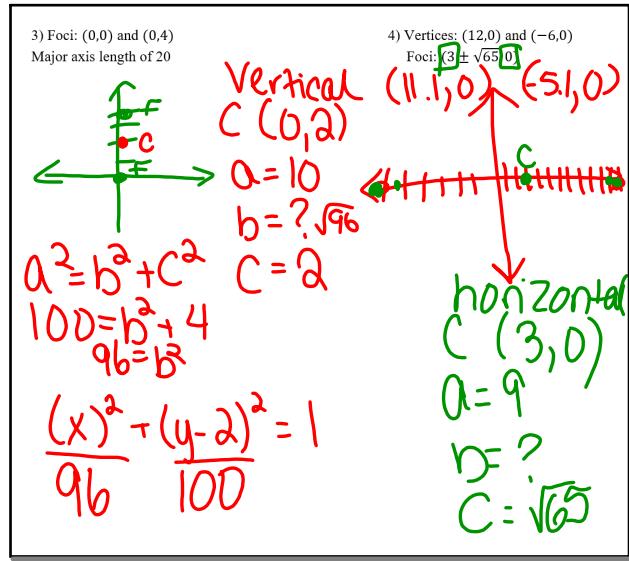
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Ellipses Day 2	
Horizontal Major Axis when $a > b$	Vertical Major Axis when $b < a$
Center at Origin $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	Center at Origin $\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$
Center Not at Origin $\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$ Center = (h,k)	Center Not at Origin $\frac{(x-h)^2}{b^2} + \frac{(y-k)^2}{a^2} = 1$ Center = (h,k)

Apr 9-7:13 AM



Apr 9-7:14 AM



Apr 9-7:14 AM

5) Complete the square to put in vertex form and then graph.

$$x^2 - 6x + 4y^2 + 16y = -21$$

Apr 9-7:14 AM