

Hyperbola

$$\frac{x^2}{9} - \frac{y^2}{4} = 1 \quad \text{left/right}$$

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$$a^2 = 9 \quad b^2 = 4$$

$$a = 3 \quad b = 2$$

x	y	$\frac{3b}{a}$
6	3.46	9

$$-4 - \frac{y^2}{4} = 1$$

$$-\frac{y^2}{4} = 5$$

$$\sqrt{y^2} = \sqrt{20}$$

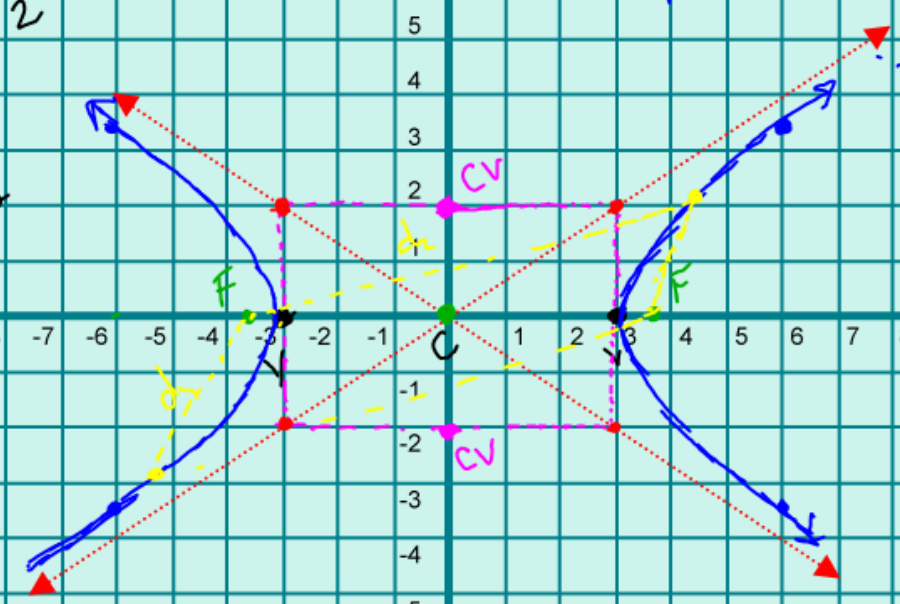
$$y = \pm 3.46$$

Asymptotes

$$y = \pm \frac{b}{a}x$$

$$y = \frac{2}{3}x$$

$$y = -\frac{2}{3}x$$



Foci $a^2 + b^2 = c^2$

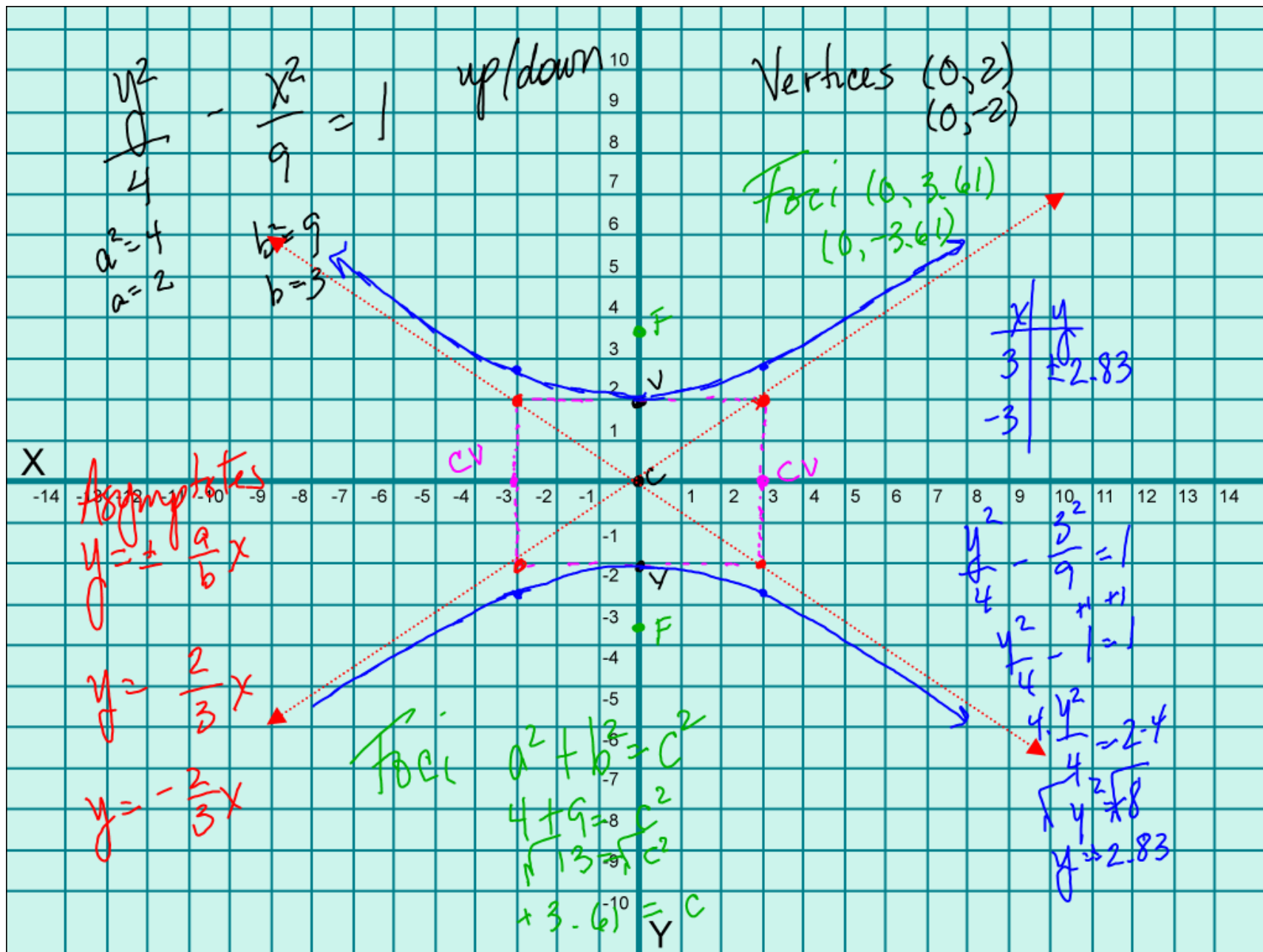
$$9 + 4 = c^2$$

$$\sqrt{13} = c$$

$$\pm 3.61 = c$$

$$(3.61, 0)$$

$$(-3.61, 0)$$



$$16x^2 - 25y^2 - 32x + 100y = 484$$

Complete
Square

$$16x^2 - 32x - 25y^2 + 100y = 484$$

$$16(x^2 - 2x + 1) - 25(y^2 - 4y + 4) = 484$$

$-\frac{2}{2}$
-1
 $(-1)^2$
1

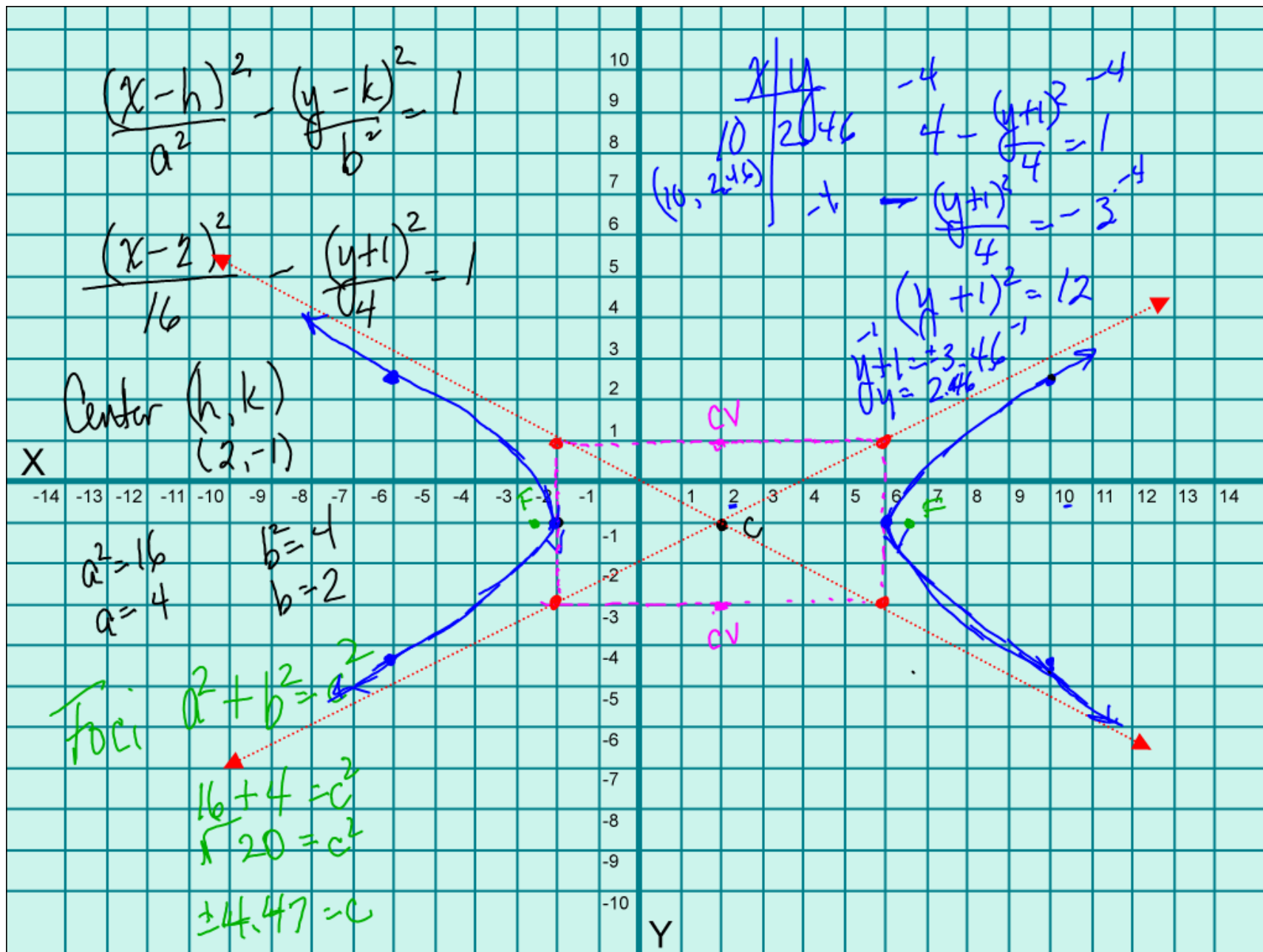
$$16(x-1)(x-1) - 25(y-2)(y-2) = 400$$

$$\frac{16(x-1)^2}{400} - \frac{25(y-2)^2}{400} = \frac{400}{400}$$

$-\frac{4}{2}$
-2
 $(-2)^2$
4

$$\frac{(x-1)^2}{25} - \frac{(y-2)^2}{16} = 1$$

p 601
8-40
x 4



$(6.47, -1)$
 $(-2.47, -1)$