

# Solving Systems of conics

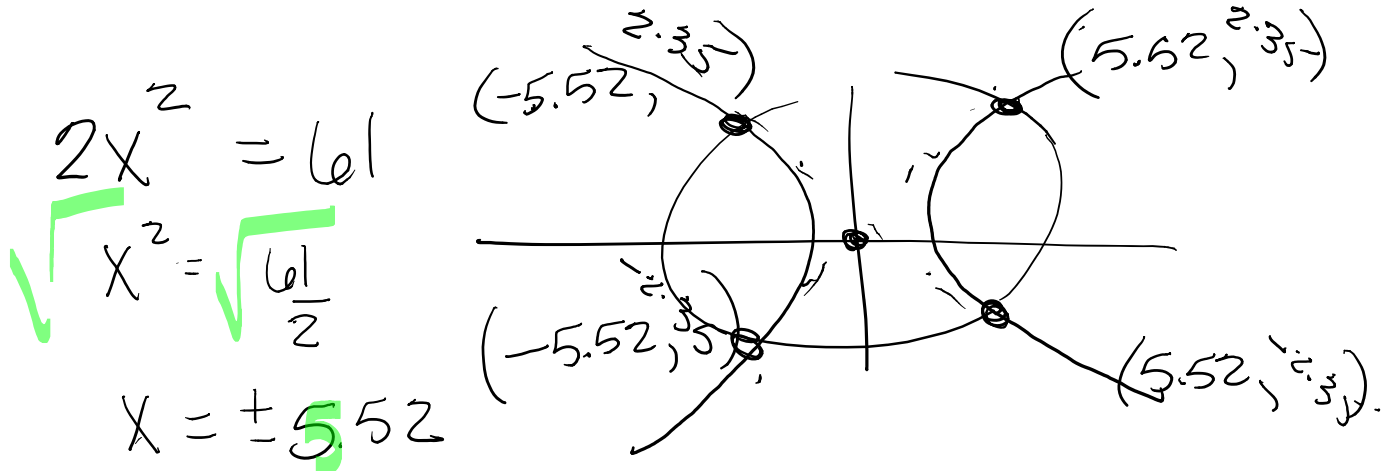
Wednesday, November 1, 2017 11:31 AM

$$x^2 - y^2 = 25$$

H: around a R 5

$$x^2 + y^2 = 36$$

circle r = 6



$$2x^2 = 64$$

$$x^2 = \frac{64}{2}$$

$$x = \pm 5.52$$

$$(5.52)^2 + y^2 = 36$$

$$y^2 = 5.53$$

$$y = \pm 2.35$$

$(-5.52, 2.35)$   
 $(-5.52, -2.35)$   
 $(5.52, 2.35)$   
 $(5.52, -2.35)$

$$x^2 + y^2 = 10$$

$$x + y = -2$$

$$(-2 - y)^2 + y^2 = 10$$

..

..

$$X = (-2-y) \left[ \begin{array}{c} (-2-y)(-2-y) \\ 4 + 2y \\ + 2y + y^2 \end{array} \right] + y^2 = 10$$

$$2y^2 + 4y + 4 = 10$$

$$\frac{2y^2 + 4y - 6 = 0}{2}$$

$$y^2 + 2y - 3 = 0$$

$$\frac{-2 \pm \sqrt{4 - 4(1)(-3)}}{2}$$

$$\frac{-2 \pm \sqrt{16}}{2}$$

$$\frac{-2 \pm 4}{2} \rightarrow \begin{array}{l} 1 \\ -3 \end{array}$$

$$x + y = -2$$

$$x + 1 = -2$$

$$x = -3$$

$$x + y = -2$$

$$x + -3 = -2$$

$$x = 1$$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\begin{array}{l} (-3, 1) \\ (1, -3) \end{array}$$

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$$y = x^2 - 3 \Rightarrow \text{equal}$$
$$y = x + 3 \quad \text{each}$$

other

$$x^2 - 3 = x + 3$$

$$x^2 - x - 3 - 3 = 0$$

$$x^2 - x - 6 = 0$$

$$(x - 3)(x + 2) = 0$$

$$x = 3 \quad x = -2$$

$$y = x^2 - 3$$
$$= 9 - 3 = 6$$

$$y = x^2 - 3$$
$$= 4 - 3 = 1$$

flow

$$(3, 6)$$
$$(-2, 1)$$