Oct 25/07

Solving a system where at least one equation is not linear.

① $y = x^2 - 7x + 12$

② $y = -x + 7$

$$-x + 7 = x^2 - 7x + 12$$

$$0 = x^2 - 6x + 5$$

$$0 = (x - 1)(x - 5)$$

$(1, 6)$ & $(5, 2)$

Plug them in

Ex $y = 5x - 15$ ①

$2y = x^2 - 6$ ②

$2(5x - 15) = x^2 - 6$

$10x - 30 = x^2 - 6$

$0 = x^2 - 10x + 24$

$0 = (x - 6)(x - 4)$

SOLN

$(6, 15)$ & $(4, 5)$

Ex $x^2 + y^2 = 16$ (1)

$+ \quad x^2 - y^2 = 16$ (2)

$2x^2 = 32$

$\frac{2x^2}{2} = \frac{32}{2}$

$\sqrt{x^2} = \sqrt{16}$

$x = \pm 4$

SOLN $(4, 0)(-4, 0)$

Ex #26 #1-8, 10-16