6. $y = -7x^2 - 5x + 4$ $\quad m = -5$

$y = -5x + k$

set $y = y$

$-7x^2 - 5x + 4 = -5x + k$

$0 = 7x^2 + (k-4)$

$0 = ax^2 + bx + c$ (c: constant term)

$b^2 - 4ac = 0$ for 1 solution

$0 - 4(7)(k-4) = 0$

$-28(k-4) = 0$

$k - 4 = 0$

$k = 4$

$\therefore$ for 1 sol'n, $y = -5x + 4$

---

try $k > 4 \rightarrow k = 5$

$b^2 - 4ac = 0 - 4(7)(5-4)$

$= 0 - 28(1)$

$= -28$

< 0

$\therefore$ for no sol'n, $k > 4$

---

try $k < 4 \rightarrow k = 3$

$b^2 - 4ac = 0 - 4(7)(3-4)$

$= -28(-1)$

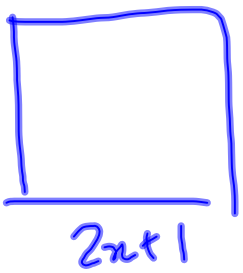
$= 28$

> 0

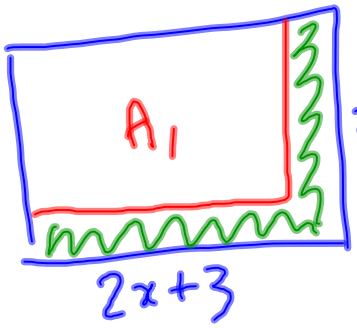
$\therefore$ for 2 sol'n $k < 4$

Feb 16-9:06 AM

p.87 #20



$A_1 = (2x+1)(x-1)$



$A_2 = (2x+3)(x+1)$

$A = A_2 - A_1$

Feb 16-9:53 AM

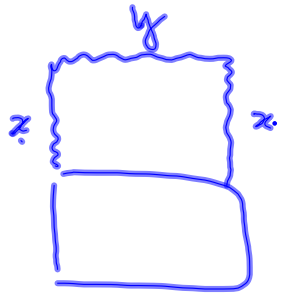
x , $x+1$

$x + (y) = 45 \rightarrow y = 45 - x$

$x^2 + (y)^2 = 1013$

$x^2 + (45-x)^2 = 1013$

Feb 16-9:55 AM



$2x + y = 30$

$y = 30 - 2x$

$A = xy$

$A = x(30-2x)$

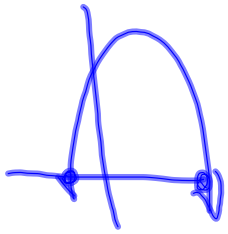
for zeroes, set $A = 0$

$x(30-2x) = 0$

$x = 0$ or $30 - 2x = 0$

$30 = 2x$

$x = 15$



$\leftarrow x_v = 7.5$

$\leftarrow y_v = 7.5(30-2(7.5))$

$= 7.5(15)$

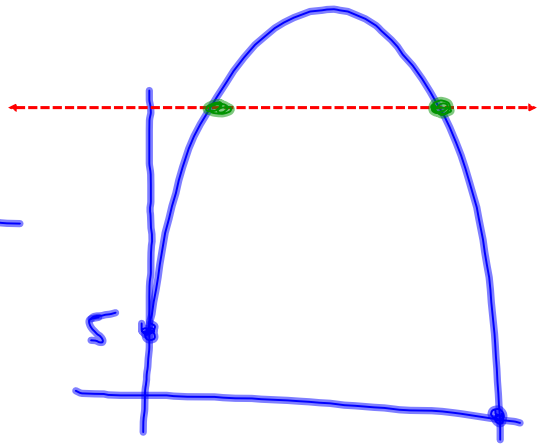
$= 112.5$

Feb 16-10:00 AM

$\rightarrow 61.25 = -5t^2 + 35t + 5$

$5t^2 - 35t + 56.25 = 0$

$t = \dfrac{35 \pm \sqrt{35^2 - 4(5)(56.25)}}{2(5)}$



Feb 16-10:04 AM

$x^2 + 4x - 1 = 0$ WS 3(d)

$x^2 + 4x + 4 - 4 - 1 = 0$

$(x+2)^2 - 5 = 0$

$(x+2)^2 = 5$

$x + 2 = \pm\sqrt{5}$

$x = -2 \pm \sqrt{5}$

$\dfrac{-4 \pm \sqrt{16 - 4(1)(-1)}}{2}$

$= \dfrac{-4 \pm \sqrt{20}}{2}$

$= \dfrac{-4 \pm \sqrt{4 \cdot 5}}{2}$

$= \dfrac{-4 \pm 2\sqrt{5}}{2}$

$= -2 \pm \sqrt{5}$

$-2+\sqrt{5}$

$-2-\sqrt{5}$

Feb 16-10:09 AM