

1. Construya la parábola que pasa por $A(-2, 3)$, $B(3, 5)$, $C(4, 1)$ y es tangente a \overline{AB} y \overline{BC}

$$1. (1-t)P_0 + tP_1$$

$$1. (1-t)\left(-\frac{2}{3}\right) + t\left(\frac{3}{3}\right)$$

$$2. (1-t)P_1 + tP_2$$

$$(1-t)\left(\frac{3}{3}\right) + t(4)$$

$$3. (1-t)P_0 + t[(1-t)P_1 + tP_2]$$

$$(1-t)\left[(1-t)\left(-\frac{2}{3}\right) + t\left(\frac{3}{3}\right)\right] + t\left[(1-t)\left(\frac{3}{3}\right) + t(4)\right]$$

$$= \left((1-t)^2 \cdot -2 + 3t(1-t) \right) + t \left[3 - 3t + 4t \right]$$

$$\left((1-t)^2 \cdot 3 + 5t(1-t) \right) + t \left[5 - 5t + 4t \right]$$

$$= \left((1-2t+t^2) \cdot -2 \right) + \left(3t - 3t^2 \right) + t \left[3 + t \right]$$

$$\left((1-2t+t^2) \cdot 3 \right) + \left(5t - 5t^2 \right) + t \left[5 - 4t \right]$$

$$= \left(-2 + 4t - 2t^2 + 3t - 3t^2 + 3t + t^2 \right)$$

$$\left(3 - 6t + 3t^2 + 5t - 5t^2 + 5t - 4t^2 \right)$$

$$= (-2 + 10t - 4t^2)$$

$$(3 + 4t - 6t^2)$$

$$x = -4t^2 + 10t - 2 \quad y = -6t^2 + 4t + 3$$

$$\left(x = -4t^2 + 10t - 2 \right) \cdot 3$$

$$\left(y = -6t^2 + 4t + 3 \right) \cdot 2$$

$$\begin{array}{r} -3x = 12t^2 - 30t + 6 \\ 2y = -12t^2 + 8t + 6 \\ \hline 2y - 3x = -22t + 12 \end{array}$$

$$t = \frac{2y - 3x - 12}{-22}$$

1. Sust. el valor encontrado de "t" en "x" tal que:

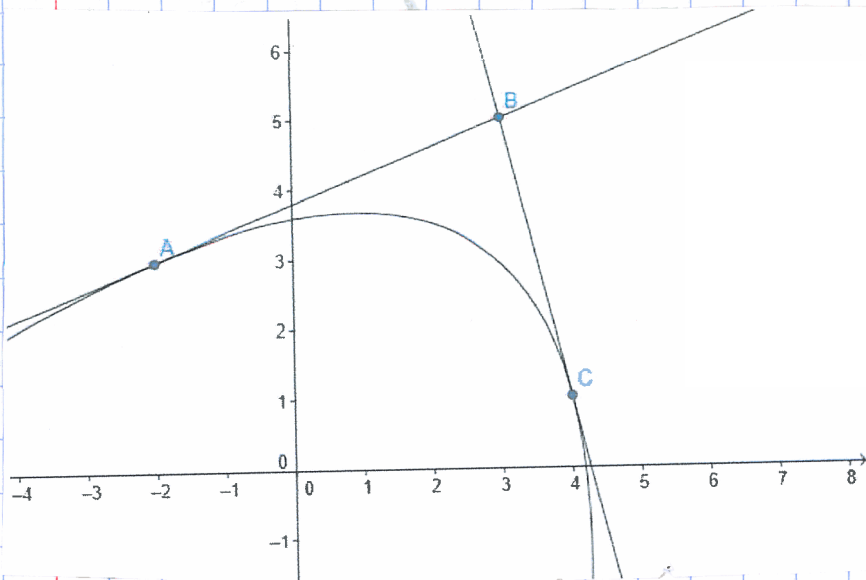
$$x = -4 \left(\frac{2y - 3x - 12}{-22} \right)^2 + 10 \left(\frac{2y - 3x - 12}{-22} \right) - 2$$

$$121 \left(x = \frac{-(4y^2 + 9x^2 + 144 - 12xy - 48y + 72x)}{121} + \frac{5(2y - 3x - 12)}{-11} \right)$$

=>

$$121x = -4y^2 - 9x^2 - 144 + 12xy + 48y - 72x - 110y + 165x + 1660 - 242$$

$$-4y^2 - 9x^2 + 12xy - 28x - 62y + 1274 = 0$$



A = (-2, 3)

B = (3, 5)

C = (4, 1)

Recta

a: $-2x + 5y = 19$

b: $4x + y = 17$

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c: $0.07x^2 - 0.1xy + 0.03y^2 +$

bu!