

Feuille de travail #3 (RAS 3,2/3,5)

1. $h(t) = -9,8t^2 + 12t + 1$

$= -4,9t^2 + 12t + 1$

$= -4,9(t^2 - 2,45t + 1,49 - 1,49) + 1$

$= -4,9(t - 1,22)^2 + 7,30 + 1$

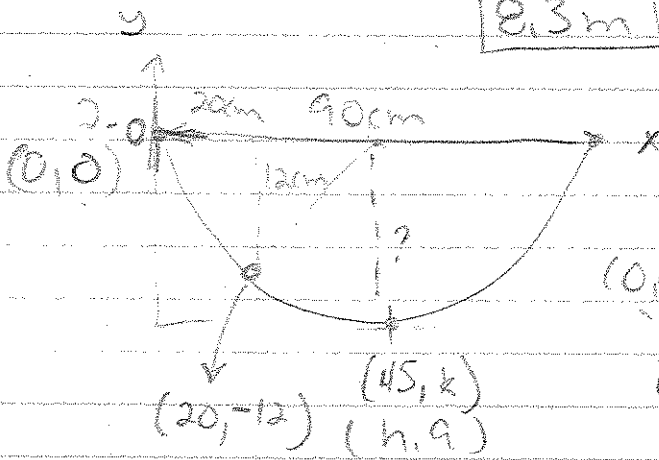
✓ $h(t) = -4,9(t - 1,22)^2 + 8,3$

$2,45 \div 2 = 1,22$

$(1,22)^2 = 1,49$

$(h, k) = (1,22; 8,3)$

8,3m



$y = a(x-h)^2 + k$

$y = a(x-45)^2 + k$

$(0,0) \rightarrow 0 = a(0-45)^2 + k$

$0 = 2025a + k$

① $k = -2025a$

$(20, -12) \rightarrow -12 = a(20-45)^2 + k$

② $-12 = a(625) + k$

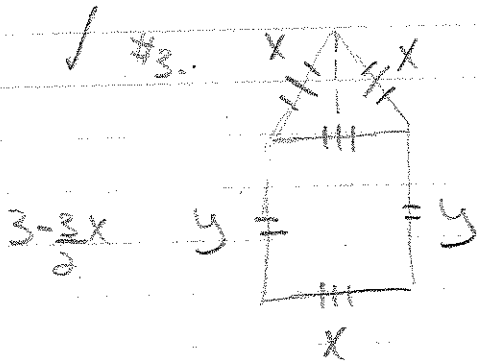
① \rightarrow ② $-12 = 625a - 2025a$

$-12 = -1400a$

$a = 0,00857$

$k = -17,35$

la distance est 17,35cm.



$$P = G = 3x + 2y$$

$$2y = 6 - 3x$$

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

$$A = x\left(3 - \frac{3x}{2}\right) + \frac{\sqrt{3}}{4}x^2$$

$$A = 3x - \frac{3}{2}x^2 + \frac{\sqrt{3}}{4}x^2$$

$$A = -1,067x^2 + 3x$$

$$A = -1,067(x^2 - 2,812x + 1,976 - 1,976)$$

$$\frac{2,812}{2} = 1,406$$

$$A = -1,067(x - 1,406)^2 + 2,108$$

$$(1,406)^2 = 1,976$$

$$(1,406; 2,108)$$

$$x \quad A$$

$$y = 3 - 1,5(1,406)$$

$$y = 0,9$$

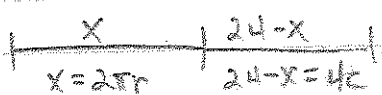
$$\text{base} = 1,406 \text{ m}$$

$$\text{hauteur} = 0,9 \text{ m}$$

✓ #4.

$$P = 24 \text{ cm}$$

$$P = 2\pi r + 4x$$



$$24 = 2\pi r + 4c$$

$$r = \frac{x}{2\pi}$$

$$c = \frac{24-x}{4}$$



$$\pi r^2$$



$$c^2$$

$$A = \pi r^2 + c^2$$

$$A = \pi \left(\frac{x}{2\pi}\right)^2 + \left(\frac{24-x}{4}\right)^2$$

$$A = \frac{\pi x^2}{4\pi^2} + \frac{576 - 48x + x^2}{16}$$

$$A = \frac{x^2}{4\pi} + 36 - 3x + \frac{x^2}{16}$$

$$A = 0,142x^2 - 3x + 36$$

$$A = 0,142(x^2 - 21,13x) + 36$$

$$A = 0,142(x^2 - 21,13x + 111,62) + 20,15$$

$$A = 0,142(x - 10,57)^2 + 20,15$$

Il faut couper

à 10,6 cm

à partir de la gauche.