

QUIZ #3.

Por favor, JUSTIFIQUE, explique, desarrolle sus respuestas.
Muestre todas sus cuentas y cálculos.

Nombre: ANSWER KEY.

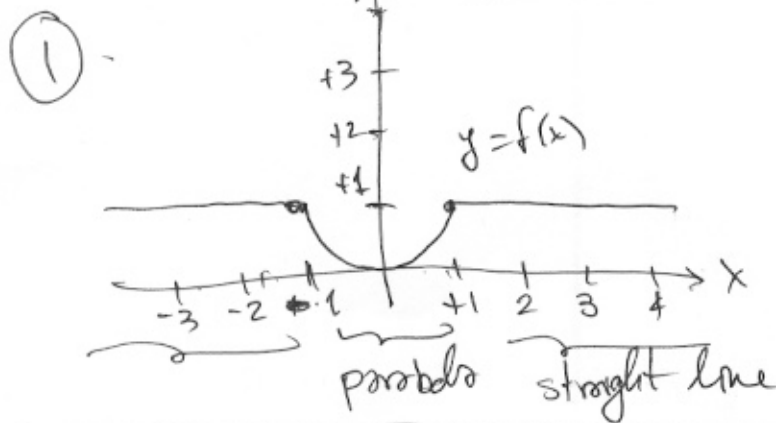
① Grafique: $f(x) = \begin{cases} x^2, & \text{si } |x| \leq 1 \\ 1, & \text{si } |x| > 1. \end{cases}$

② Calcule la razón de cambio promedio de:
 $f(x) = 3x - 2$, entre $x=2$ y $x=3$

③ Si: $f(x) = \begin{cases} x^2, & \text{si } |x| \leq 1 \\ 1, & \text{si } |x| > 1. \end{cases}$, grafique: $y = f(x-2) + 1$.



SOLUTION SET



② We have to compute

$$\frac{F(3) - F(2)}{3 - 2} = \frac{(3(3) - 2) - (3(2) - 2)}{1} = \frac{9 - 6}{1} = 3$$

Average Rate of change = 3

= 1 =

Quiz #3

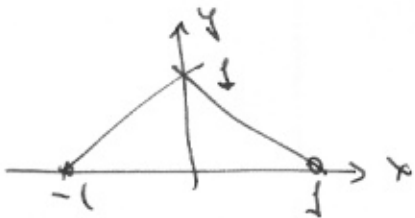
Por favor, Justifique, explique, desarrolle sus respuestas.
Muestre todos sus aciertos y cálculos

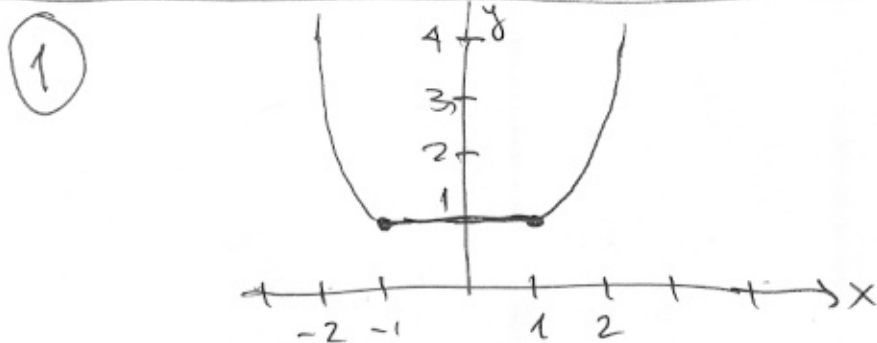
Nombre:

① Grafique: $g(x) = \begin{cases} 1, & \text{si } |x| \leq 1 \\ x^2, & \text{si } |x| > 1. \end{cases}$

② Calcule la razón de cambio promedio de.

$g(x) = 5 + \frac{1}{2}x$, entre $x=1$ y $x=5$.

③ Si $f(x) =$  , grafique: $y = f(x+1) - 2$



Parabola Straight line. Parabola

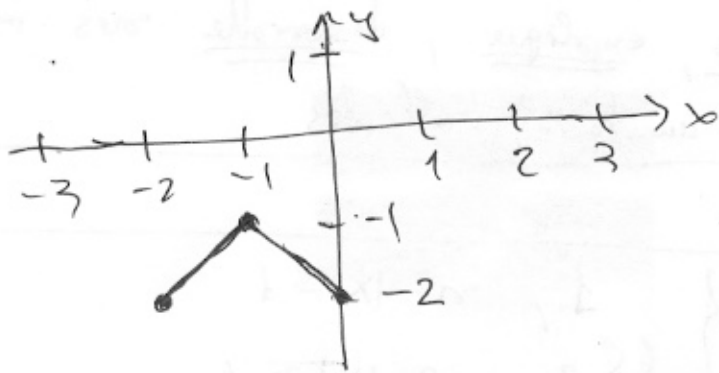
② We have to compute:

$$\begin{aligned} \frac{g(5) - g(1)}{5 - 1} &= \frac{\left(5 + \frac{1}{2} \cdot 5\right) - \left(5 + \frac{1}{2} \cdot 1\right)}{4} = \frac{\frac{1}{2}(5-1)}{4} = \frac{\frac{1}{2}(4)}{4} \\ &= \frac{1}{2} \cdot \frac{4}{4} = \frac{1}{2} \end{aligned}$$

= 3 =

The average rate of change = $\frac{1}{2}$

- ③ Move left 1 unit,
and down 2 units



⑤ - (Left) = y



$$\frac{(A) + (B) + (C) + (D) + (E) + (F) + (G) + (H) + (I) + (J) + (K) + (L) + (M) + (N) + (O) + (P) + (Q) + (R) + (S) + (T) + (U) + (V) + (W) + (X) + (Y) + (Z)}{1 - 2} = 4$$

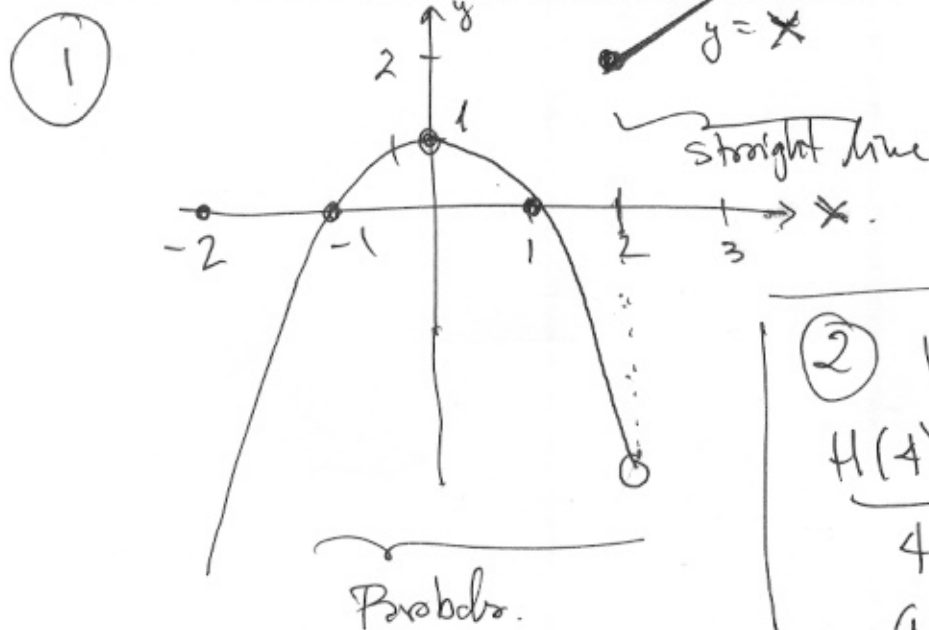
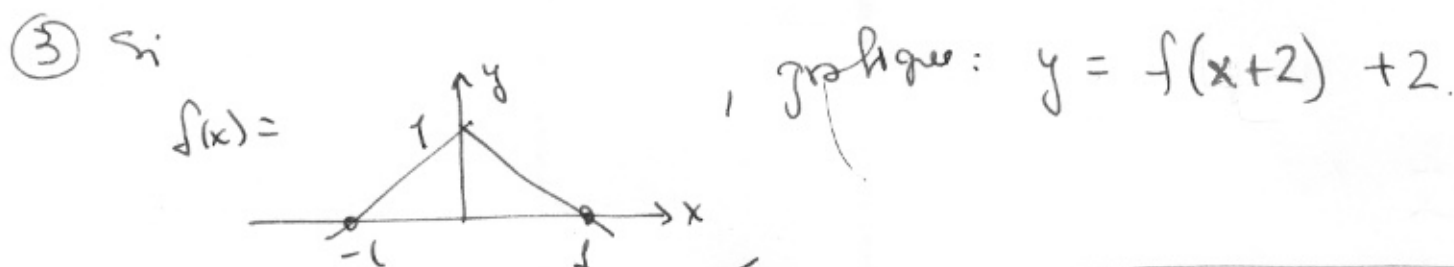
⑤ We have to compare

QUIZ #3

Por favor, JUSTIFIQUE, explique, desarrolle sus respuestas.
Muestre todos sus cálculos y cálculos.

① Encuentre: $h(x) = \begin{cases} 1-x^2, & \text{si } x \leq 2 \\ x, & \text{si } x > 2. \end{cases}$

② Calcule la razón de cambio promedio de $h(x) = t^2 + 2t$, entre $t = -1$ y $t = 4$.



② We need to compute

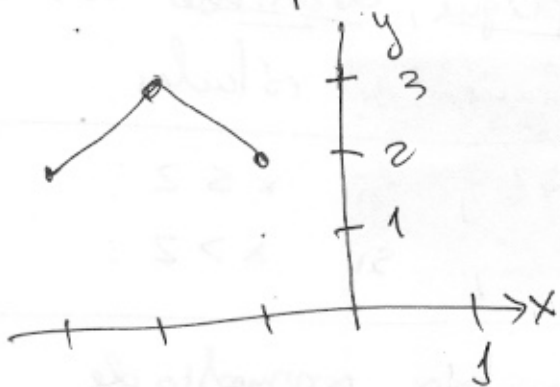
$$\frac{h(4) - h(-1)}{4 - (-1)} =$$

$$= \frac{(4^2 + 2(4)) - ((-1)^2 + 2(-1))}{4 + 1}$$

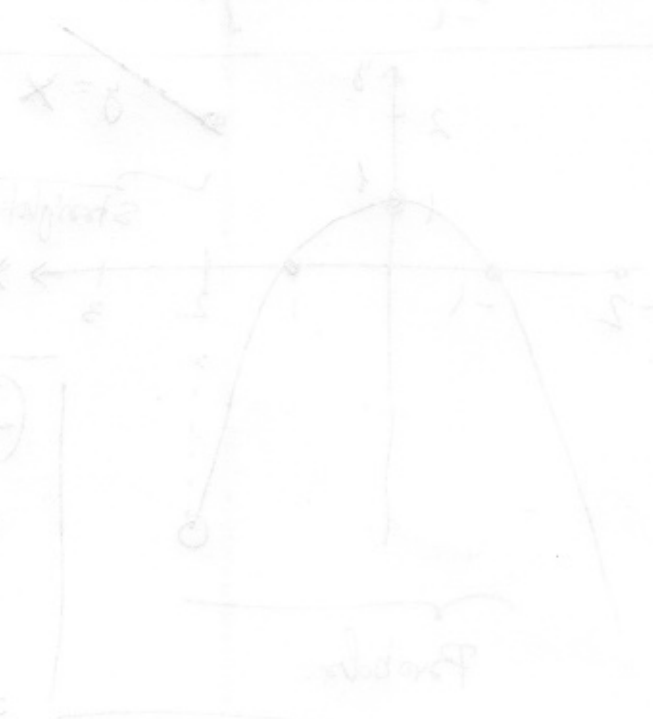
$$= \frac{(24) - (-1)}{5} = \frac{25}{5} = 5$$

Average rate of change = 5

③ Move left 2 units
and then up 2 units



③
 $f(x) = x^2 - 4x + 5$
 $f(2) = 2^2 - 4(2) + 5 = 4 - 8 + 5 = 1$



⑤ We need to complete the square

$$= \frac{H(H) - H(-1)}{+ - (-1) +}$$

$$= \frac{H^2 + 2H - (-1) - (-1)}{+ +}$$

of graph = 2

$$= \frac{(2H) - (-1) - (-1)}{2} = \frac{2H + 2}{2} = H + 1$$

= 6 =