

Y0

pas d'images c. d'images

l'ensemble (Y0)

$x \mapsto x f(x) \mapsto 0$
 $x \mapsto f(x) \mapsto 0$
 $f(0) = -2, 1, 2$



$D_f = [-2, 0] \cup [1, 2]$

(Y)

$-x \mapsto x \mapsto 0$
 $f(x) \mapsto 0$
 $f(x) = -2, 1, 2$



$D_f = (-2, 0) \cup (1, 2)$
 $-2, -1, 1$
 $-2, 1, 2$

(Y)

$f(1) - 1f(1) = 1 - 1 + 1 = 1 \rightarrow f(1) = -1$
 $f(-1) \cdot 1f(-1) = (-1)^2 - 1(-1) + 1$
 $f(-1) = -1 + 1 + 1 = 1$

(Y)

$f(1) = 1 + 1 = 2 \rightarrow f(2) = 2 \cdot \sqrt{2+1} = 2$
 $f(2) \cdot 2 \rightarrow f(2) = 1 + 1 = 2$

(Y)

$f(x-1) = a(x-1)^2 - b(x-1) + 1 = a(x^2 + 1 - 2x) - b(x-1) + 1 = ax^2 + a - 2ax - bx + b + 1$
 $ax + a - 2ax = bx + b + 1 - ax^2 + bx = 9x + 1$
 $a - 2a = b \rightarrow a = -b$
 $-2a = 4 \rightarrow a = -2$
 $-2 + b = 1 \rightarrow b = 3$
 $a - b = -2 - 3 = -5$

(Y)

$f(x) = \frac{(x+1)^2 + 1}{(x+1)^2 + 1}$
 $f(\sqrt{1}-1) = \frac{(\sqrt{1})^2 + 1}{(\sqrt{1})^2 + 1} = \frac{1}{1} = 1$

(Y)

$f(x - \frac{1}{x}) = \frac{x^2 + 1}{x^2} = \frac{x^2}{x^2} + \frac{1}{x^2} = 1 + \frac{1}{x^2}$
 $(x - \frac{1}{x})^2 + 1 \rightarrow f(x) = x^2 + 1$
 $f(-3) = (-3)^2 + 1 = 10$

(Y)

الف) $\frac{f}{g} = \left\{ (0, \frac{1}{10}), (1, \frac{-1}{10}), (2, \frac{0}{10}) \right\} = \left\{ (0, \frac{1}{10}), (1, \frac{-1}{10}), (2, 0) \right\}$
 $[-3, 3] \rightarrow [-1, 1]$
 $D_f = \{ 2, 1, 0 \}$

(Y)

ب) $\frac{f}{g} = \left\{ (0, \frac{1}{10}), (1, \frac{\sqrt{1}}{-1}) \right\}$

(Y)

9.

الف $\{(2, 2), (3, 1), (-5, 4), (1, -4)\}$

ب $\{(2, 2), (3, 5), (-5, 3), (1, -1)\}$

ج $\{(2, 4), (3, 49), (-5, 13), (1, 13)\}$

د $\{(1, 1), (\frac{3}{4}, 4), (-\frac{5}{4}, 2), (\frac{1}{4}, -2)\}$

10.

الف $F-g = \{(2, 2), (1, 4), (3, 2)\}$

ب $\frac{2F}{9} = \{(2, 2), (1, \frac{1}{9}), (3, -2)\}$
 تعريف للنسبة