da dare elementi di A non portano frecce

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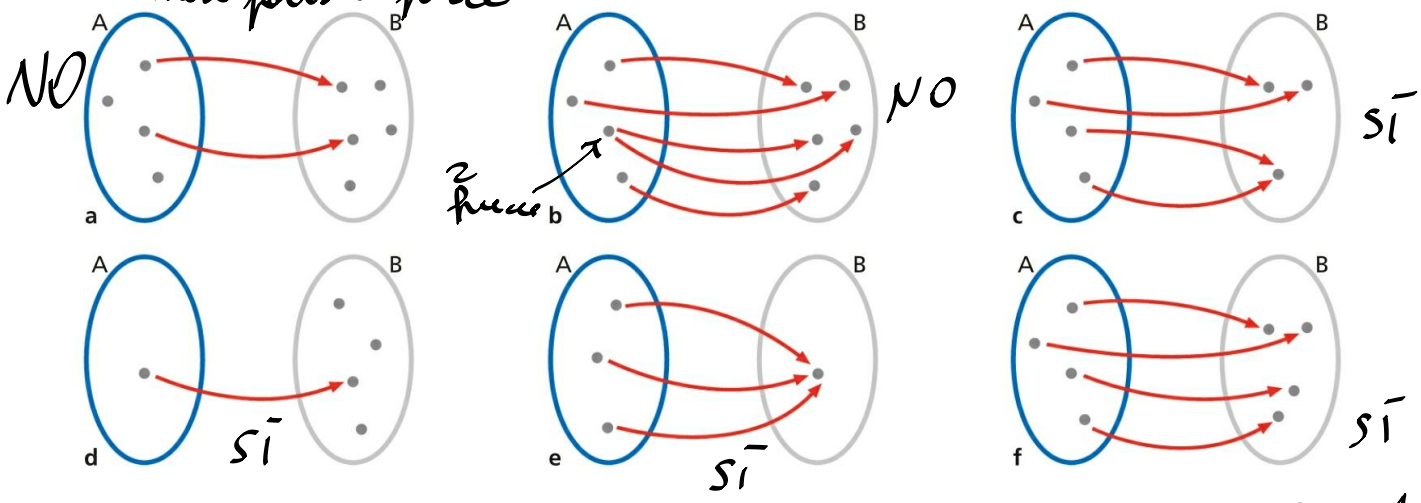


$5x = \frac{1}{6}$

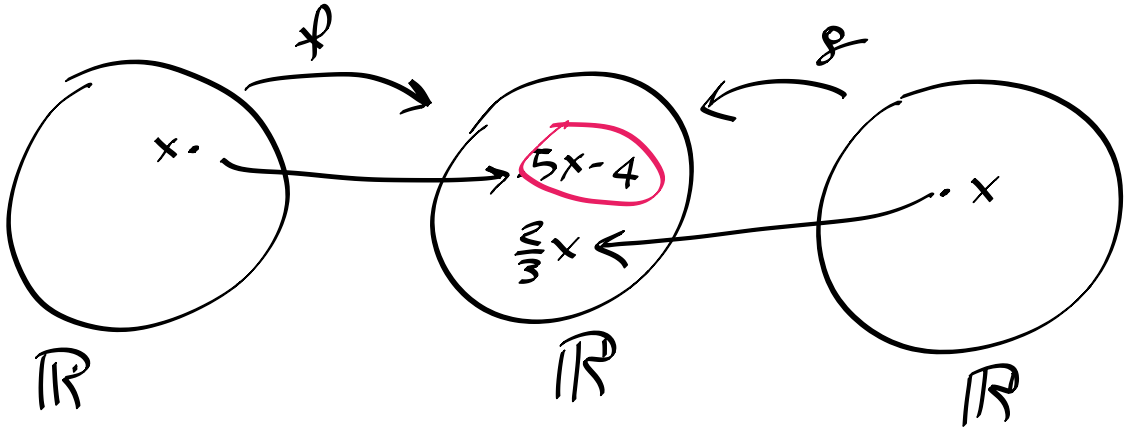
13 $y = 5x$, $15 = f(3)$; $-\frac{35}{2} = f\left(-\frac{7}{2}\right)$; $-20 = f(-4)$; $\frac{1}{6} = f\left(\frac{1}{30}\right)$.

14 $y = -\frac{2x}{3}$, $-8 = f(12)$; $-\frac{14}{15} = f\left(\frac{7}{5}\right)$; $\frac{4}{3} = f(-2)$; $8 = f(-12)$.

$\frac{4}{3} = -\frac{2x}{3}$

20 Date le funzioni $y = f(x) = 5x - 4$ e $y = g(x) = \frac{2}{3}x$, determina, se esiste, il valore (o i valori) di x per cui le due funzioni hanno la stessa immagine.

$\left[x = \frac{12}{13}\right]$



$5x - 4 = \frac{2}{3}x \qquad \frac{15x - 12}{3} = \frac{2x}{3}$

$13x = 12 \Rightarrow x = \frac{12}{13}$

INFATTI

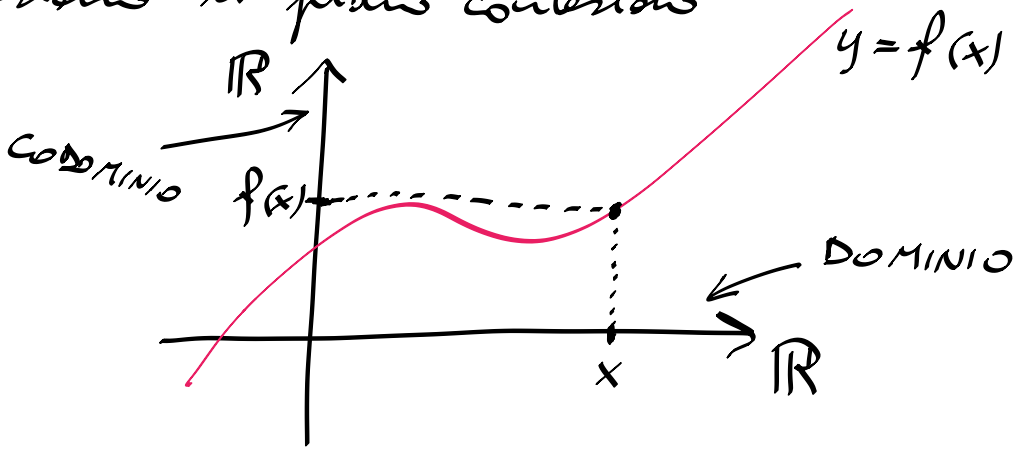
$f\left(\frac{12}{13}\right) = 5 \cdot \frac{12}{13} - 4 = \frac{60}{13} - 4 = \frac{60 - 52}{13} = \frac{8}{13}$

$g\left(\frac{12}{13}\right) = \frac{2}{3} \cdot \frac{12}{13} = \frac{8}{13}$

FUNZIONI NUMERICHE $f: \mathbb{R} \to \mathbb{R}$

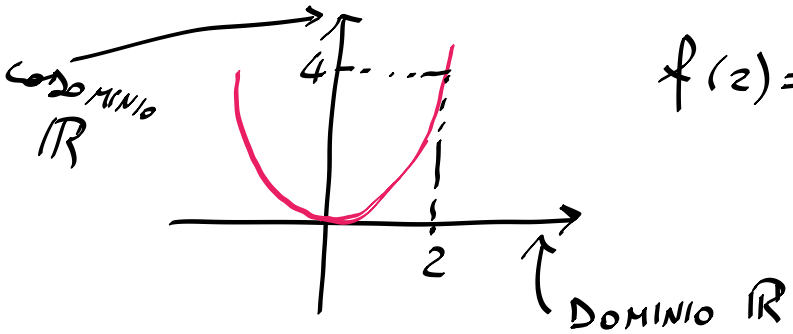
anziché usare

usiamo il piano cartesiano



ESEMPIO

$f: \mathbb{R} \to \mathbb{R}$ $\quad f(x) = x^2$



$f(2) = 2^2 = 4$

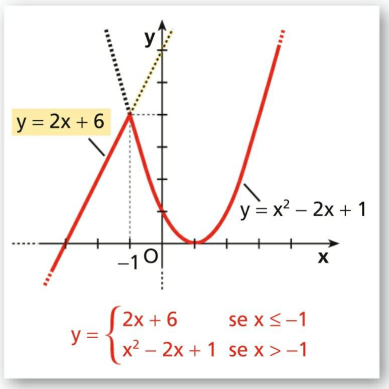
$$f(x) = y = \begin{cases} 2x + 6 & \text{se } x \leq -1 \\ x^2 - 2x + 1 & \text{se } x > -1 \end{cases}$$

DOMINIO $= \mathbb{R}$ $\quad$ CODOMINIO $\mathbb{R}$

$f(-1) = 4$

$f(0) = 0^2 - 2 \cdot 0 + 1 = 1$
perché $0 > -1$

$f(-2) = 2(-2) + 6 = 2$
perché $-2 \leq -1$



ESEMPIO DI GIADA

$f: \mathbb{R} \to \mathbb{R}$

$$f(x) = \begin{cases} 3x + 9 & \text{se } x \leq -3 \\ x^2 - 4x + 2 & \text{se } x > -3 \end{cases}$$

DISEGNARLA PER COMPITO

DOMINIO → CALCOLARLO!!

1) $y = \sqrt{x-2}$ $\quad x - 2 \geq 0 \to x \geq 2$

DOMINIO $D: x \geq 2$

2) $y = \frac{2}{x+3}$ $\quad x + 3 \neq 0 \to D: x \neq -3$