

L1. FUNCTIA DE GRADUL I - PROBLEME PROPUSE

1. Reprezentați grafic funcțiile:

a) $f : \{-2, -1, 0, 1, 2\} \rightarrow \mathbb{R}, f(x) = 3x - 2$

b) $f : \{-3, -2, 0, 1, 2, 3\} \rightarrow \mathbb{R}, f(x) = -x^2 + 4$

c) $f : \{-2, -1, 0, 1, 2\} \rightarrow \mathbb{R}, f(x) = 3x - 2$

d) $f : \{-6, -3, 0, 3, 6\} \rightarrow \mathbb{R}, f(x) = -\frac{2}{3}x + 3$

e) $f : \{-3, -2, -1, 0, 1, 2\} \rightarrow \mathbb{R}, f(x) = \begin{cases} x + 2 & \text{daca } x < 0 \\ -2x & \text{daca } x \geq 0 \end{cases}$

f) $f : (-\infty ; 3] \rightarrow \mathbb{R}, f(x) = x + 3$

g) $f : (-2 ; +\infty) \rightarrow \mathbb{R}, f(x) = 2x + 3$

i) $f : (-3 ; 2] \rightarrow \mathbb{R}, f(x) = -x + 5$

j) $f : [-2 ; 3] \rightarrow \mathbb{R}, f(x) = 2x - 3$

k) $f : (-3 ; 3) \rightarrow \mathbb{R}, f(x) = x - 2$

l) $f : \mathbb{R} \rightarrow \mathbb{R}, f(x) = 0,25x - 1, (6)$

m) $f : \mathbb{R} \rightarrow \mathbb{R}, f(x) = -2x$

n) $f : \mathbb{R} \rightarrow \mathbb{R}, f(x) = -3$

o) $f : \mathbb{R} \rightarrow \mathbb{R}, f(x) = |x - 2|$

p) $f : \mathbb{R} \rightarrow \mathbb{R}, f(x) = \begin{cases} -x + 1 & \text{daca } x < -2 \\ 3 & \text{daca } x \in [-2 ; 2] \\ x + 1 & \text{daca } x > 2 \end{cases}$

r) $f : A \rightarrow \mathbb{R}, f(x) = -x + 2, \text{ unde } A = \{x \in \mathbb{Z} \mid |x| \leq 2\}$

s) $f : A \rightarrow \mathbb{R}, f(x) = 3x - 2, \text{ unde } A = \{x \in \mathbb{Z} \mid |x - 1| < 3\}$

2. Fie funcția $f : A \rightarrow \mathbb{R}, f(x) = x^2 + 2, \text{ unde } A = \{x \in \mathbb{Z}^* \mid -1 < \frac{2x + 1}{5} < 3\}$

Trasati graficul functiei.

3. Fie funcția $f : A \rightarrow \mathbb{R}, f(x) = |x - 1| + 3, \text{ unde } A = \{x \in \mathbb{Z}^* \mid -3 < \frac{2x - 7}{5} < 1\}$

Trasati graficul functiei.