22/04/2018 PROVA CÁLCULO 1

$f(x) = |x+2| + |x| + |x-2|$

$x=0,\ f(0) = |0+2| + |0| + |0-2| = 4$

$f(0,1) = |0,1+2| + |0,1| + |0,1-2| = 4,3$

a) ESBOÇO GRÁFICO DE f

$x \le -2 \Rightarrow f(x) = -3x$

$|-2+2| + |-2| + |-2-2| = 6 = -3(x)$

$-3(-2)$

$-3+2| + |-3| + | = 3 - 2 +$

b) x SE $f(x) \le 5$

$x \le -2 \Rightarrow f(x) = -3x \ge 6$

SE $x \le -2$ $f(x) \ge 5$ $-3(-2)$

$-2 \ge x \ge 1$

$6 \ge$

$x \ge 2 \Rightarrow f(x) = 3x \ge 6$

$2 \le x \le 2$ SE $x \ge 2$, $f(x) \ge 6$ $f(2) = 6$

$[-1, 1]$

$4 - x \le 5 \iff x \ge -1$

$-2 \ge x \ge 2$, $f(x) \ge 6$

$-2 \le x \le 2$, $f(x) \le 6$

$4 - (-1) = 5$, $x = -1$

$x + 4 \le 5 \iff x \le 1$

$1 + 4 = 5$, $x = 1$

R: $[1, -1]$

$f(x) = 4 - x$, $-2 \le x \le 0$

$|-1+2| + |-1| + |-1-2| = 5 = 4 - x$

1 1 3

$A(-1)$

$0 \le x \le 2 \Rightarrow f(x) = x + 4$

$|1+2| + |1| + |1-2| = 5 = x + 4$

3 1 1

$x+4$

$f(x) = 3x$, $x \ge 2$

$|2+2| + |2| + |2-2| = 6 = 3x$

4 2 0

$3(2)$

$x = 0,\ f(0) = |0+2| + |0| + |0-2| = 4$

$f(0) = 4$, $f(1) = 5$ $\}$ $+1$ $\Rightarrow |x+4|$

$f(0) = 4$, $f(-1) = 5$ $\}$ -1 $\Rightarrow |x-4|$

$x \ge +1$ ou ≤ -1

$x = \text{const} = 4$