

***feuille p. 4

Exercices :

1. a)

$$|x - 2| < 7$$

$$|x - 2| = 7$$

$$x - 2 = 7 \quad x - 2 = -7$$

$$x = 9 \quad x = -5$$

si $x = 0$

$$|0 - 2| < 7$$

$$2 < 7$$

oui

solution : $]-5, 9[$

b)

$$|2x + 1| \geq 3$$

$$|2x + 1| = 3$$

$$2x + 1 = 3 \quad 2x + 1 = -3$$

$$2x = 2 \quad 2x = -4$$

$$x = 1 \quad x = -2$$

si $x = 0$

$$|2(0) + 1| \geq 3$$

$$1 \geq 3$$

non

solution : $]-\infty, -2] \cup [1, +\infty[$

c)

$$3|2x + 7| \leq 9$$

$$3|2x + 7| = 9$$

$$2x + 7 = 3 \quad 2x + 7 = -3$$

$$2x = -4 \quad 2x = -10$$

$$x = -2 \quad x = -5$$

si $x = -3$

$$3|2(-3) + 7| \leq 9$$

$$3 \leq 9$$

oui

solution : $[-5, -2]$

d)

$$3|9 - x| \leq 6$$

$$3|9 - x| = 6$$

$$9 - x = 2 \quad 9 - x = -2$$

$$-x = -7 \quad -x = -11$$

$$x = 7 \quad x = 11$$

si $x = 8$

$$3|9 - 8| \leq 6$$

$$3 \leq 6$$

oui

solution : $[7, 11]$

e)

$$|9 - x| > 6$$

$$|9 - x| = 6$$

$$9 - x = 6 \quad 9 - x = -6$$

$$-x = -3 \quad -x = -15$$

$$x = 3 \quad x = 15$$

si $x = 4$

$$|9 - 4| > 6$$

$$5 > 6$$

non

solution : $]-\infty, 3[\cup]15, \infty[$

f)

$$|2x - 1| < 11$$

$$|2x - 1| = 11$$

$$2x - 1 = 11 \quad 2x - 1 = -11$$

$$2x = 12 \quad 2x = -10$$

$$x = 6 \quad x = -5$$

si $x = 0$

$$|2(0) - 1| < 11$$

$$1 < 11$$

oui

solution : $]-5, 6[$