

1) Review of elementary functions (Part 1) :

Examples - Equations - Graphs - Exercises
Use of Mathematical software.

a) *Linear functions vs Affine functions*

$$f : x \mapsto y = mx \quad \text{vs} \quad g : x \mapsto y = mx + p$$

b) *General equation of straight lines : $ax + by + c = 0$*

c) *Graphing inequalities : $ax + by \leq c$*

d) *Graphing linear systems of inequalities* $\begin{cases} ax + by \leq c \\ a'x + b'y \leq c' \end{cases}$

e) *Word problems (Kinematics & Economics)*

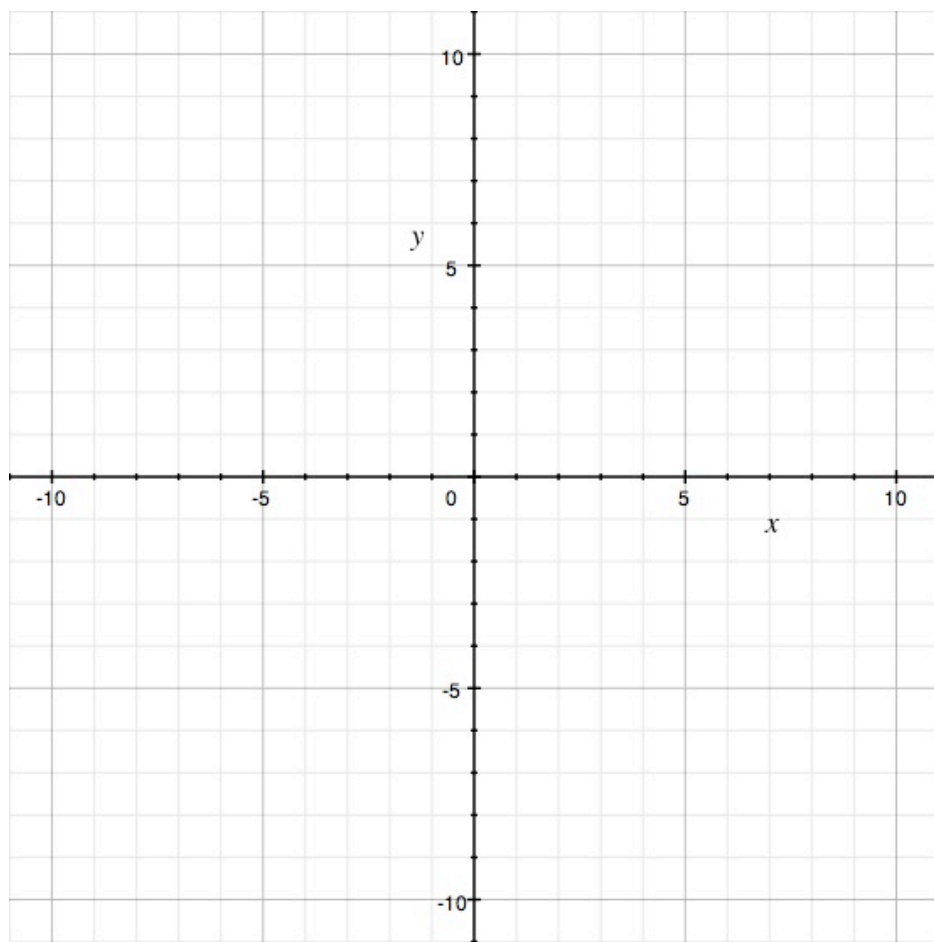
I.1 **Draw** the lines defined by the given equations below (show which is which) :

(1) $2x - y + 4 = 0$

(2) $2x + y + 4 = 0$

(3) $y - 2x + 4 = 0$

(4) $y + 2x - 4 = 0$



I.2 **Shade** the area defined
by the system of
inequalities below :

$$\begin{cases} (1) & 2x - y \geq -4 \\ (2) & 2x + y \geq -4 \\ (3) & 2x - y \leq 4 \\ (4) & 2x + y \leq 4 \end{cases}$$

I.3 From the graph, determine the measure of the shaded area (in square units).