

► **Activité n°1**

- a) $x \geq 3 \xrightarrow{+1} x + 1 \geq 4$
- b) $x \leq -2 \xrightarrow{\times 4} 4x \leq -8$
- c) $x + 3 \leq 7 \xrightarrow{-3} x \leq 4$
- d) $x \geq 10 \xrightarrow{\times (-2)} -2x \leq -20$
- e) $4x \leq 12 \xrightarrow{\times \frac{1}{4}} x \leq 3$
- f) $-3x \geq 24 \xrightarrow{\times (-\frac{1}{3})} x \leq -8$
- g) $x \leq 5 \xrightarrow{\times (-2)} -2x \geq -10 \xrightarrow{+4} -2x + 4 \geq -6$
- h) $5x + 1 \leq 16 \xrightarrow{-1} 5x \leq 15 \xrightarrow{\times \frac{1}{5}} x \leq 3$
- i) $3 - 4x \leq 11 \xrightarrow{-3} -4x \leq 8 \xrightarrow{\times (-\frac{1}{4})} x \geq -2$
- j) $-2 \leq x \leq 4 \xrightarrow{+6} 4 \leq x + 6 \leq 10$
- k) $1 \leq x \leq 8 \xrightarrow{\times 4} 4 \leq 4x \leq 32$
- l) $-3 \leq x \leq 5 \xrightarrow{\times (-3)} -15 \leq -3x \leq 9$
- m) $-1 \leq x \leq 4 \xrightarrow{\times 5} -5 \leq 5x \leq 20 \xrightarrow{-7} -12 \leq 5x - 7 \leq 13$
- n) $-5 \leq x \leq 7 \xrightarrow{\times (-1)} -7 \leq -x \leq 5 \xrightarrow{+2} -5 \leq -x + 2 \leq 7$
- o) $-1 \leq 3x - 4 \leq 5 \xrightarrow{+4} 3 \leq 3x \leq 9 \xrightarrow{\times \frac{1}{3}} 1 \leq x \leq 3$
- p) $-7 \leq -4x + 1 \leq 5 \xrightarrow{-1} -8 \leq -4x \leq 4 \xrightarrow{\times (-\frac{1}{4})} -1 \leq x \leq 2$

► **Activité n°2**

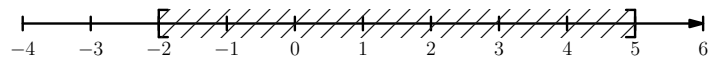
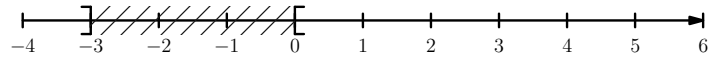
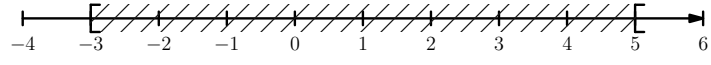
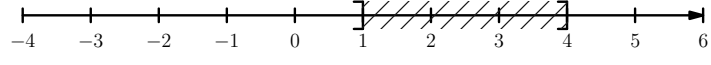
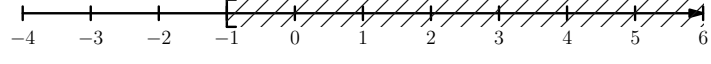
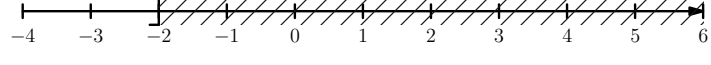
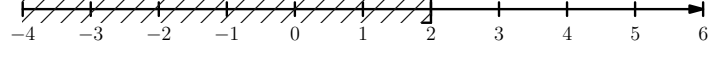
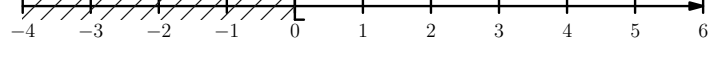
- a) Si $4 < x < 5$ alors $16 < x^2 < 25$
- b) Si $2 < x < 3$ alors $4 < x^2 < 9$ et $-18 < -2x^2 < -8$
- c) Si $2 < x < 6$ alors $\dots < \frac{1}{x} < \dots$
- d) Si $\frac{1}{2} < x < \frac{4}{3}$ alors $\frac{1}{6} < \frac{1}{x} < \frac{1}{2}$
- e) Si $\frac{1}{4} < x < \frac{1}{3}$ alors $3 < \frac{1}{x} < 4$ et $2 < \frac{1}{x} - 1 < 3$
- f) Si $\frac{1}{5} < x < 1$ alors $1 < \frac{1}{x} < 5$ et $-20 < -\frac{4}{x} < -4$
- g) Si $4 < \frac{1}{x} < 9$ alors $\frac{1}{9} < x < \frac{1}{4}$
- h) Si $12 < \frac{3}{x} < 18$ alors $4 < \frac{1}{x} < 6$ et $\frac{1}{6} < x < \frac{1}{4}$

► **Activité n°3**

Intervalle	Schéma
$[-2; 4]$	
$] -3; 2]$	
$] -\infty; 5]$	
$] 1; +\infty[$	

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► **Activité n°4**

Intervalle	Schéma
$[-2; 5]$	
$] -3; 0[$	
$[-3; 5[$	
$]1; 4]$	
$[-1; +\infty[$	
$] -2; +\infty[$	
$] -\infty; 2]$	
$] -\infty; 0[$	

► **Activité n°5**

- $[0; 4[\cap] -3; 1[= [0; 1[$
- $[-1; 5[\cap [0; +\infty[= [0; 5[$
- $] -\infty; -1[\cap] -2; 4] =] -2; -1[$
- $[-3; 2] \cap]3; +\infty[= \emptyset$
- $] -\infty; 0[\cap [0; +\infty[= \{0\}$

► **Activité n°6**

- $[-2; 4[\cup]0; 5[= [-2; 5[$
- $] -3; +\infty[\cup [1; +\infty[=] -3; +\infty[$
- $] -\infty; 0[\cup] -1; 4] =] -\infty; 4]$