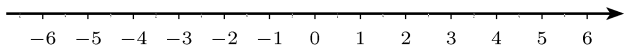
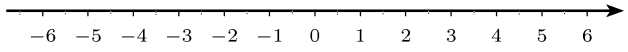
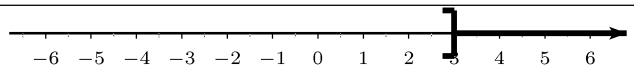
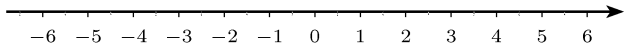
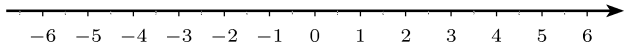
Inégalités et intervalles

Exercice 1 :

Compléter le tableau ci-dessous :

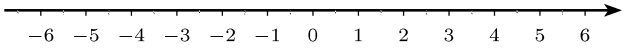
Inégalité	Représentation sur un axe	Intervalle
$-5 \leq x \leq 2$		$[-5;2]$
$-2 \leq x < 4$		
		$]3;+\infty[$
$2 \geq x$		
$x < 0$		

Exercice 2 :

Colorier les nombres solutions des inéquations suivantes et compléter les phrases correspondantes

a.

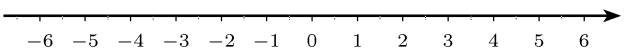
$x > 4$



L'intervalle solution est .....

b)

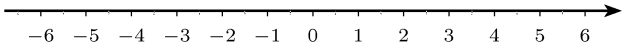
$-2 < x \leq 3$



L'intervalle solution est .....

c.

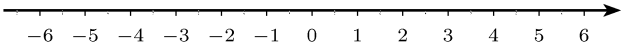
$2x + 5 \geq 9$



L'intervalle solution est .....

d.

$8x - 7 < 11x + 2$



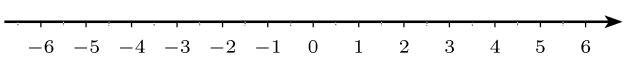
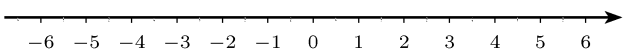
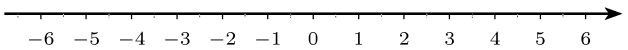
L'intervalle solution est .....

Définitions:

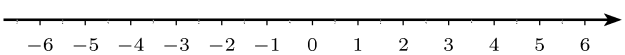
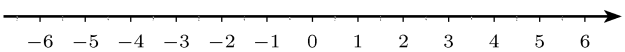
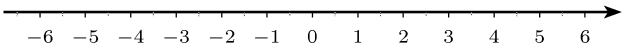
- *L'intersection de deux intervalles est l'ensemble des nombres appartenant aux deux intervalles à la fois.*
- *L'union de deux intervalles est l'ensemble des nombres appartenant à l'un (au moins) des deux intervalles.*

Exercice 3 :

a. Déterminer l'intersection des intervalles suivants (le symbole $\cap$ se lit "inter" et représente l'intersection) :

Intersection	Représentation sur un axe	Intervalle
$[-4;5] \cap [3;+\infty[$		
$]-\infty;3] \cap]2;4[$		
$[5;+\infty[\cap [-3;5[$		

b. Déterminer l'union des intervalles suivants (le symbole $\cup$ se lit "union" et représente l'union) :

Union	Représentation sur un axe	Intervalle
$[-4;5] \cup [3;6]$		
$]-\infty;3] \cup]2;4[$		
$[5;+\infty[\cup [-3;5[$