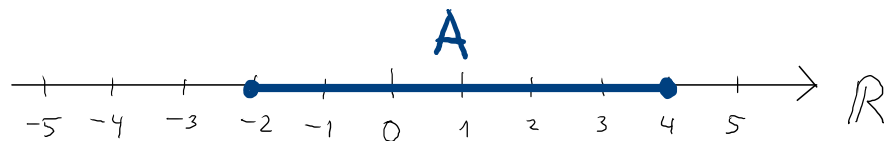
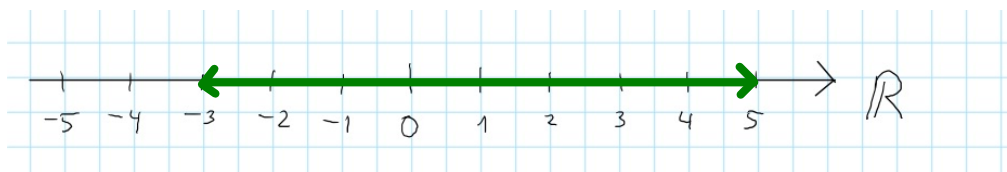


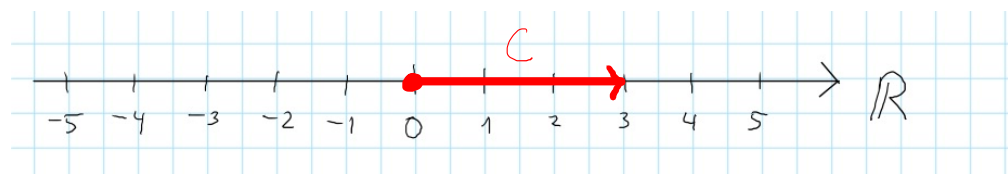
# Les intervalles de $\mathbb{R}$



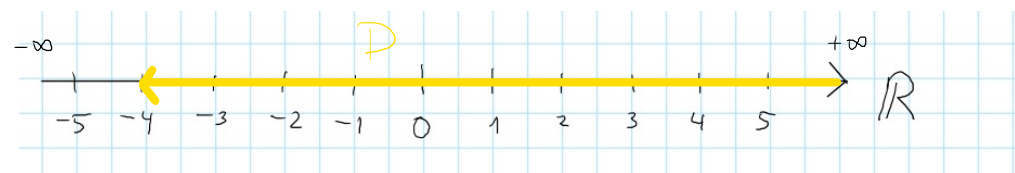
$$A = \{x \in \mathbb{R} \mid -2 \leq x \leq 4\} = [-2; 4] \text{ intervalle fermé}$$



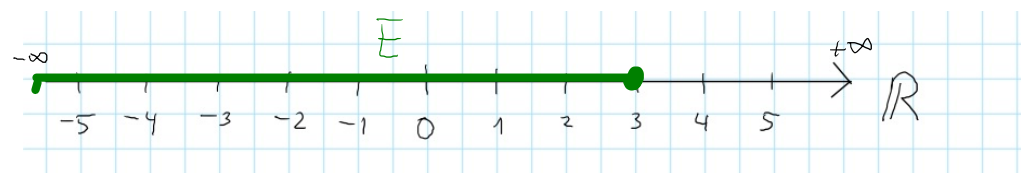
$$B = \{x \in \mathbb{R} \mid -3 < x < 5\} = ]-3; 5[ \text{ intervalle ouvert}$$



$$C = \{x \in \mathbb{R} \mid 0 \leq x < 3\} = [0; 3[ \text{ intervalle semi-ouvert}$$



$$D = \{x \in \mathbb{R} \mid x > -4\} = ]-4; +\infty[$$



$$E = \{x \in \mathbb{R} \mid x \leq 3\} = ]-\infty; 3]$$

### 3.1.7 Décrire les ensembles suivants à l'aide d'intervalles

a)  $A = \{x \in \mathbb{R} \mid -3 \leq x \leq 5\}$

b)  $B = \{x \in \mathbb{R} \mid 4 \leq x < 5\}$

c)  $C = \{x \in \mathbb{R} \mid x < 1\}$

d)  $D = \{x \in \mathbb{R} \mid x \geq 10\}$

e)  $E = \{x \in \mathbb{R} \mid x \geq -2 \text{ et } x \leq 2\} = \{x \in \mathbb{R} \mid -2 \leq x \leq 2\}$

f)  $F = \mathbb{R}$

g)  $G = \{2\}$

$$A = [-3; 5]$$

$$B = [4; 5[$$

$$C = ]-\infty; 1[$$

$$D = [10; +\infty[$$

$$E = [-2; 2]$$

$$F = ]-\infty; +\infty[$$

$$G = [2; 2]$$

} pas terrible!

**3.1.9** On donne trois intervalles  $I$ ,  $J$  et  $K$  de  $\mathbb{R}$ . Déterminer  $I \cap J$ ,  $I \cap K$ ,  $I - (J \cup K)$ ,  $(I - J) \cup (I - K)$  dans les cas suivants.

a)  $I = [-3 ; 4[$        $J = [-2 ; 0[$        $K = ] - 5 ; 3]$

b)  $I = ] - 4 ; 2]$        $J = [-2 ; 3]$        $K = ] - 3 ; 1[$

c)  $I = ] - 5 ; 3[$        $J = ] - 1 ; 5]$        $K = [-3 ; 4]$