

Inégalités Intervalles

Soient les intervalles suivants :

$$I = [-3; 11] \quad J =]-5; 7[\quad K =]3; 5[\quad L = [-9; 4[$$

Déterminer

$I \cap J$	$I \cap K$	$I \cap L$	$J \cap K$	$J \cap L$	$K \cap L$
$I \cup J$	$I \cup K$	$I \cup L$	$J \cup K$	$J \cup L$	$K \cup L$
$I \cap J \cap K$	$J \cap K \cap L$	$I \cap J \cap L$	$I \cap K \cap L$	$I \cap J \cap K \cap L$	
$I \cup J \cup K$	$J \cup K \cup L$	$I \cup J \cup L$	$I \cup K \cup L$	$I \cup J \cup K \cup L$	

Représenter les intervalles solutions sur un axe (directement orienté)

Ecrire sous forme d'intervalles les inégalités suivantes :

$$-4 < x < 6 \quad \Leftrightarrow \quad x \in]-4; 6[$$

$$-3 \leq x \leq 4 \quad \Leftrightarrow \quad x \in [-3; 4]$$

$$-2 \leq x < 5 \quad \Leftrightarrow \quad x \in [-2; 5[$$

$$-7 < x \leq 8 \quad \Leftrightarrow \quad x \in]-7; 8]$$

$$x < 9 \quad \Leftrightarrow \quad x \in]-\infty; 9[$$

$$x \leq -3 \quad \Leftrightarrow \quad x \in]-\infty; -3]$$

$$5 \leq x \quad \Leftrightarrow \quad x \in [5; +\infty[$$

$$-7 < x \quad \Leftrightarrow \quad x \in]-7; +\infty[$$

Ecrire sous forme d'inégalités les intervalles suivants :

$$x \in]-3; 2] \quad \Leftrightarrow \quad -3 < x \leq 2$$

$$x \in [4; 6] \quad \Leftrightarrow \quad 4 \leq x \leq 6$$

$$x \in [5; 10[\quad \Leftrightarrow \quad 5 \leq x < 10$$

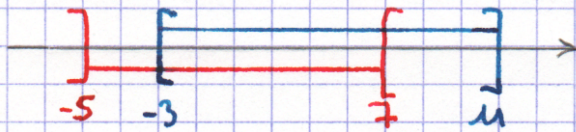
$$x \in]-3; 10[\quad \Leftrightarrow \quad -3 < x < 10$$

$$x \in]-5; +\infty[\quad \Leftrightarrow \quad -5 < x$$

$$x \in]-\infty; 9[\quad \Leftrightarrow \quad x < 9$$

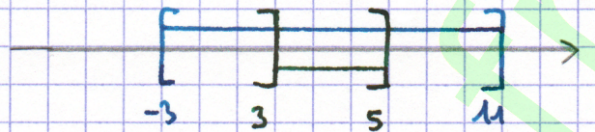
$$x \in [-10; +\infty[\quad \Leftrightarrow \quad -10 \leq x$$

$$x \in]-\infty; 7] \quad \Leftrightarrow \quad x \leq 7$$



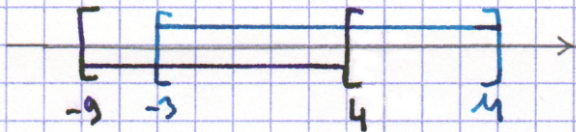
$$J \cap K =]-3; 7[$$

$$J \cup K =]-5; 11[$$



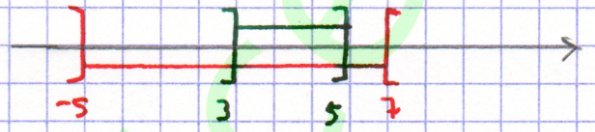
$$K \cap L =]4; 5[$$

$$K \cup L =]3; 11[$$



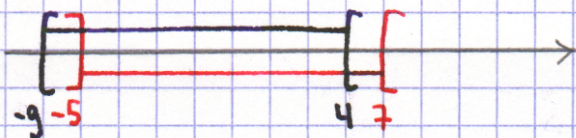
$$L \cap M =]4; 4[$$

$$L \cup M =]-9; 11[$$



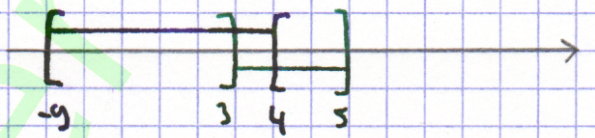
$$J \cap K =]3; 5[$$

$$J \cup K =]-5; 7[$$



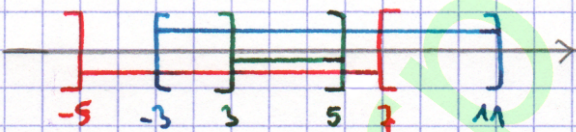
$$L \cap K =]-5; 4[$$

$$L \cup K =]-9; 7[$$



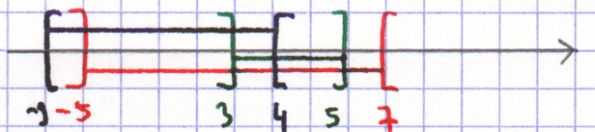
$$K \cap L =]4; 4[$$

$$K \cup L =]3; 5[$$



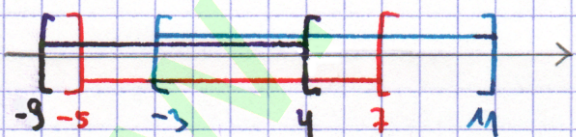
$$J \cap K =]3; 5[= K$$

$$J \cup K =]-5; 11[$$



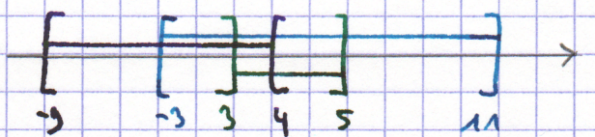
$$J \cap L =]4; 5[$$

$$J \cup L =]-5; 7[$$



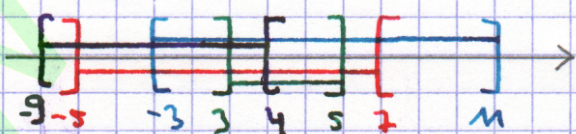
$$J \cap L =]-3; 4[$$

$$J \cup L =]-5; 11[$$



$$K \cap L =]4; 4[$$

$$K \cup L =]3; 5[$$



$$J \cap K \cap L =]3; 4[$$

$$J \cup J \cup K \cup L =]-5; 11[$$