

**3**Znázorni na číselné ose a najdi průnik  $I \cap J$ , sjednocení  $I \cup J$  a rozdíly  $I - J, J - I$  intervalů  $I, J$  pokud :

**a)**  $I = (2; 7)$   
 $J = (5; 9)$

**f)**  $I = (-\infty; -10)$   
 $J = (-12; 25)$

**b)**  $I = (-10; 10)$   
 $J = \left\langle \frac{5}{6}; 12 \right\rangle$

**g)**  $I = \left( -\infty; \frac{1}{2} \right)$   
 $J = \left\langle -\frac{3}{2}; \frac{7}{3} \right\rangle$

**c)**  $I = \left( -\frac{8}{7}; 12 \right)$   
 $J = \left\langle -15; \frac{11}{2} \right\rangle$

**h)**  $I = \left\langle -0,3; \frac{1}{3} \right\rangle$   
 $J = \left( 0,3; \frac{7}{3} \right)$

**d)**  $I = (-10; 10)$   
 $J = \langle 10; 20 \rangle$

**i)**  $I = (-8; -1)$   
 $J = \langle 1; 5 \rangle$

**e)**  $I = \langle -1; 1 \rangle$   
 $J = \langle 0,5; 1,2 \rangle$

**j)**  $I = (0; \infty)$   
 $J = (0,1; 10)$

## Výsledky

**3**

- a)**  $I \cap J = (5; 7)$   
 $I \cup J = (2; 9)$   
 $I - J = (2; 5)$   
 $J - I = \langle 7; 9 \rangle$
- b)**  $I \cap J = \left\langle \frac{5}{6}; 10 \right\rangle$   
 $I \cup J = (-10; 12)$   
 $I - J = \left( -10; \frac{5}{6} \right)$   
 $J - I = \langle 10; 12 \rangle$
- c)**  $I \cap J = \left( -\frac{8}{7}; \frac{11}{2} \right)$   
 $I \cup J = \langle -15; 12 \rangle$   
 $I - J = \left( \frac{11}{2}; 12 \right)$   
 $J - I = \left\langle -15; -\frac{8}{7} \right\rangle$
- d)**  $I \cap J = \{10\}$   
 $I \cup J = (-10; 20)$   
 $I - J = (-10; 10)$   
 $J - I = (10; 20)$
- e)**  $I \cap J = \langle 0, 5; 1 \rangle$   
 $I \cup J = \langle -1; 1, 2 \rangle$   
 $I - J = \langle -1; 0, 5 \rangle$   
 $J - I = (1; 1, 2)$
- f)**  $I \cap J = (-12; -10)$   
 $I \cup J = (-\infty; 25)$   
 $I - J = (-\infty; -12)$   
 $J - I = \langle -10; 25 \rangle$
- g)**  $I \cap J = \left\langle -\frac{3}{2}; \frac{1}{2} \right\rangle$   
 $I \cup J = \left( -\infty; \frac{7}{3} \right)$   
 $I - J = \left( -\infty; -\frac{3}{2} \right)$   
 $J - I = \left\langle \frac{1}{2}; \frac{7}{3} \right\rangle$
- h)**  $I \cap J = \left( 0, 3; \frac{1}{3} \right)$   
 $I \cup J = \left\langle -0, 3; \frac{7}{3} \right\rangle$   
 $I - J = \langle -0, 3; 0, 3 \rangle$   
 $J - I = \left\langle \frac{1}{3}; \frac{7}{3} \right\rangle$
- i)**  $I \cap J = \emptyset$   
 $I \cup J = (-8; -1) \cup \langle 1; 5 \rangle$   
 $I - J = (-8; -1)$   
 $J - I = \langle 1; 5 \rangle$
- j)**  $I \cap J = (0, 1; 10)$   
 $I \cup J = (0; \infty)$   
 $I - J = (0; 0, 1) \cup \langle 10; \infty \rangle$   
 $J - I = \emptyset$