

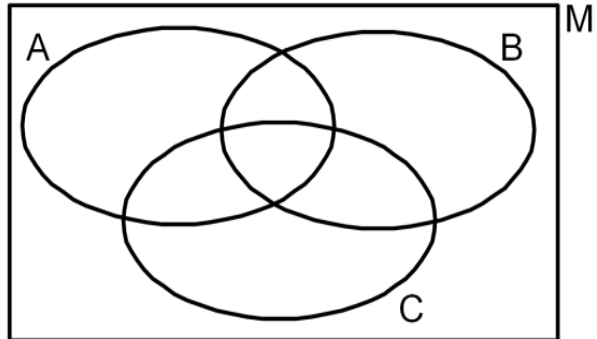
množinové operace

1) Jsou dány množiny $A = \{ a; b; c; d; e; f \}$; $B = \{ a; d; g \}$; $C = \{ b; d; f \}$

a) doplňte znak $\subset, \not\subset$

$A \subset B$; $B \subset C$; $C \subset A$; $A \subset C$; $B \subset A$; $C \subset B$;

b) Prvky množin zapište do množinového diagramu:



c) Určete množiny:

$$A \cap B =$$

$$A \cap C =$$

$$B \cap C =$$

$$A \cap B \cap C =$$

$$A \cup B =$$

$$A \cup C =$$

$$B \cup C =$$

$$A \cup B \cup C =$$

$$A - B =$$

$$A - C =$$

$$B - C =$$

$$A - B - C =$$

$$A \cap B \cup C =$$

$$A \cup B \cap C =$$

$$A \cup B - C =$$

$$A \cap B - C =$$

$$A \cap C - B =$$

2) Jsou dány množiny:

$$a) A = \{-4; -2,7; -2; 1; 2; \sqrt{5}; 3; 7; 8\};$$

$$B = \{-15; 2; \sqrt{5}; 3; 7\};$$

$$C = \{-2,7; 1; \sqrt{5}; 8\};$$

Určete množiny:

$$A \cup C =$$

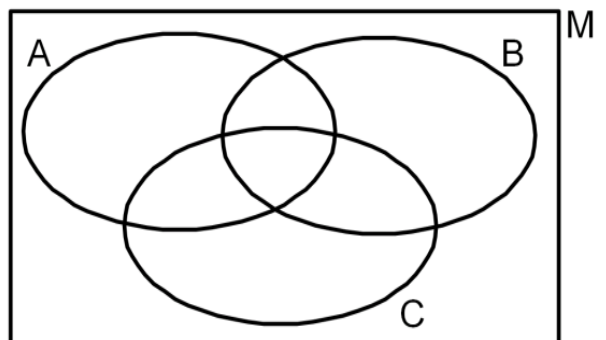
$$B \cap C =$$

$$A \cap B \cap C =$$

$$A - B =$$

$$B - A =$$

$$A \cap C =$$



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b) $A = \{-4; -2,7; -2; 1; 2; \sqrt{5}; 3; 7; 8\};$

$B = \{-15; 2; \sqrt{5}; 3; 7\};$

$C = \{-2; 2; 3; 7\}.$

Určete množiny:

$A \cap C =$

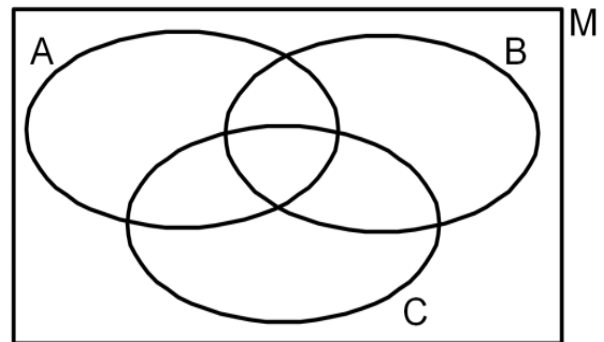
$C \cup B =$

$A - C =$

$A \cap B \cup C =$

$A \cup C =$

$A \cap B \cap C =$



3) Zapište pomocí intervalů a na číselné ose znázorněte:

a) $A = \langle -3; 4 \rangle; B = \langle 1; 5 \rangle$

$A \cup B =$

$A \cap B =$

$A - B =$

$B - A =$

b) $A = \langle -3; 4 \rangle; B = (1; 5)$

$A \cup B =$

$A \cap B =$

$A - B =$

$B - A =$

c) $A = \langle -3; 4 \rangle; B = (1; 5)$

$A \cup B =$

$A \cap B =$

$A - B =$

$B - A =$

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4) Zakreslete na číselné ose a co nejjednodušším způsobem zapište množiny:

a) $(2;7) \cap \langle 3;+\infty) =$

b) $(2;7) \cap \langle 8;+\infty) =$

c) $(2;7) \cup \langle 3;+\infty) =$

d) $(-\infty; 4) \cup \langle 0;+\infty) =$

e) $(-\infty; 3) \cup \langle 5;+\infty) =$

f) $(-\infty; 3) \cap \langle 5;+\infty) =$

g) doplněk intervalu $(-\infty; 6)$ v množině \mathbb{R}

h) $(2;7) - \langle 3;+\infty) =$

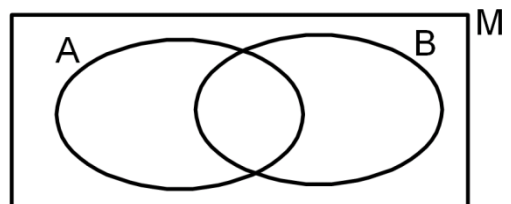
i) $\langle 3;+\infty) - (2;7) =$

5) Najděte takové množiny A;B pro něž platí:

a) $A \cup B = \{-7; 0; 1; \sqrt{6}; 3; 4; 5; 9\}; A \cap B = \{0; 3; 5\}; B - A = \{4; \sqrt{6}; 9\}$

A =

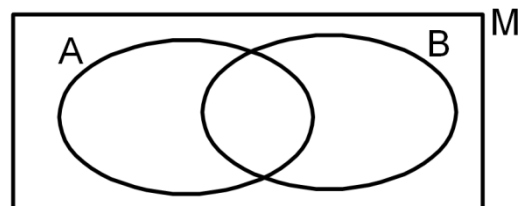
B =



b) $A \cup B = \{-3; -2; 0; 1; 4; 5\}; A \cap B = \{\}; B - A = \{-3; 1; 4\}$

A =

B =

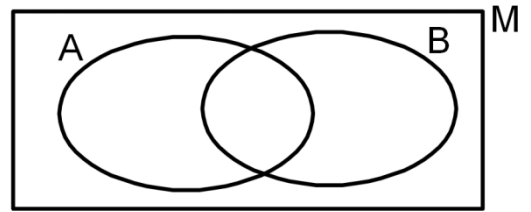


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c) $A \cup B = \{-3; 0; 2; 4\}$; $A \cap B = \{-3; 0\}$; $A - B = \{2\}$

A =

B =



d) $B = (-1; 2)$; $A \cap B = (0; 2)$; $A \cup B = (-1; 2)$

A =

B =

6) Zapište pomocí intervalů a na číselné ose znázorněte:

a) $A = \{x \in \mathbb{R}; |x| \geq 3,4\}$; $B = \{x \in \mathbb{R}; |x| < 6,1\}$

A =

B =

$A \cap B =$

$A \cup B =$

$A - B =$

$B - A =$

b) $A = \{x \in \mathbb{R}; |x| \geq 4\}$; $B = \{x \in \mathbb{R}; |x| > 6\}$

A =

B =

$A \cap B =$

$A \cup B =$

$A - B =$

$B - A =$

c) $A = \{x \in \mathbb{R}; |x| \leq 5\}$; $B = \{x \in \mathbb{R}; |x| < 7\}$

$A =$

$B =$

$A \cap B =$

$A \cup B =$

$A - B =$

$B - A =$

d) $A = \{x \in \mathbb{R}; |x| \leq 5\}$; $B = \{x \in \mathbb{R}; |x| > 7\}$

$A =$

$B =$

$A \cap B =$

$A \cup B =$

$A - B =$

$B - A =$

7) Určete:

$(-2,7; 4) \cap \mathbf{N} =$

$(-2,7; 4) \cap \mathbf{Z} =$

$(-2,7; 4) \cap \mathbf{N} =$

$(-2,7; 4) \cap \mathbf{Z} =$

$\langle -5; \sqrt{10} \rangle \cap \mathbf{N} =$

$\langle -5; \sqrt{10} \rangle \cap \mathbf{Z} =$

$\langle -5; \sqrt{10} \rangle \cap \mathbf{N} =$

$\langle -5; \sqrt{10} \rangle \cap \mathbf{Z} =$