Množiny a intervaly

1. Určete dané množiny výčtem nebo intervalem:

a) $A = \{x \in Z; -1 < x < 3\} = \{0; 1; 2\}$
b) $B = \{b \in N; b \leq 0\} = \emptyset$
c) $C = \{c \in R; c \leq 0\} = (-\infty; 0\rangle$
d) $D = \{d \in R; |d| > 2\} = (-\infty; -2) \cup (2; \infty)$
e) $E = \{e \in R; |e - 4| \leq 0\} = \{4\}$
f) $F = \{f \in R; |f - 4| \geq 0\} = \boldsymbol{R}$
g) $G = \{g \in Z; |g| < 3\} = \{-2; -1; 0; 1; 2\}$
h) $H = \{h \in R; |h + 2| \leq 4\} = \langle -6; 2\rangle$
i) $I = \{i \in R; -5 < i \leq 0\} = (-5; 0\rangle$
j) $J = \{j \in R; |j| < 0\} = \emptyset$
k) $K = \{k \in R; |k| > 0\} = (-\infty; 0) \cup (0; \infty)$
l) $L = \{l \in Z; -4 \leq l < -3\} = \{-4\}$
m) $M = \{m \in R; -4 \leq m < -3\} = \langle -4; -3)$
n) $N = \{n \in R; -4 \leq n\} = \langle -4; \infty)$
o) $O = \{o \in R; o > 3\} = (3; \infty)$
p) $P = \{p \in N; -4 \leq p < 3\} = \emptyset$
q) $Q = \{q \in R; |q + 1| \geq -1\} = \boldsymbol{R}$
r) $R = \{r \in R; |r - 3| < -2\} = \emptyset$

2. Určete:

a) $C \cap B = \emptyset$
b) $C \cap A = \{0\}$
c) $N \cap O = (3; \infty)$
d) $Q \cap I = (-5; 0\rangle$
e) $A \cap O = \emptyset$
f) $C \cup D = (-\infty; 0\rangle \cup (2; \infty)$
g) $H \cup J = \langle -6; 2\rangle$
h) $P \cup G = \{-2; -1; 0; 1; 2\}$
i) $E \cup D = (-\infty; -2) \cup (2; \infty)$
j) $C \cup I = (-\infty; 0\rangle$

3. Určete sjednocení a průniky následujících intervalů:

a) $(-2; 3) \cap (3; \infty) = \emptyset$
b) $\langle -2; 3\rangle \cap (3; \infty) = \emptyset$
c) $\langle -2; 3\rangle \cap \langle 3; \infty) = \{3\}$
d) $\langle 3; 5) \cup (5; 8)$
e) $\langle 3; 5\rangle \cup (5; 8) = \langle 3; 8)$
f) $\langle 3; 5\rangle \cup \langle 5; 8\rangle = \langle 3; 8\rangle$
g) $(-\infty; 2\rangle \cap (-2; 1) = (-2; 1)$
h) $(-\infty; -4\rangle \cup (-2; 1)$
i) $(-\infty; 2\rangle \cap \langle 3; 7\rangle = \emptyset$
j) $(-\infty; 2\rangle \cap (-2; \infty) = (-2; 2\rangle$
k) $(-\infty; -2\rangle \cup (-2; 1) = (-\infty; 1)$
l) $(-3; 2\rangle \cup (-2; 4) = (-3; 4)$