

練習 1 (1) $3 \in \mathbb{Q}$ (2) $\sqrt{2} \notin \mathbb{Q}$ (3) $-\frac{3}{2} \in \mathbb{Q}$

練習 2 (1) $\{1,2,3,6,9,18\}$ (2) $\{10,12,14\}$ (3) $\{1,3,5,7, \dots\}$

練習 3 (1) $B \subset A$ (2) $A = C$ (3) $A \subset D$

練習 4 \emptyset $\{1\}$ $\{2\}$ $\{3\}$ $\{1,2\}$ $\{2,3\}$ $\{1,3\}$ $\{1,2,3\}$

練習 5 $A \cap B = \{5,15\}$ $A \cup B = \{1,3,5,7,9,10,11,13,15\}$

練習 6 $A \cap B \cap C = \{1,2,3,6\}$ $A \cup B \cup C = \{1,2,3,4,5,6,7,9,12,18\}$

練習 7 (1) $\{1,4,6,8,9\}$ (2) $\{1,2,6,7,8,9\}$ (3) $\{1,6,8,9\}$ (4) $\{1,2,4,6,7,8,9\}$
(5) $\{4\}$ (6) $\{2,7\}$ (7) $\{1,2,3,5,6,7,8,9\}$ (8) $\{1,3,4,5,6,8,9\}$

練習 8 略

練習 9

$A \cup B = \{2,3,4,6,8,9\}$ $\overline{A \cup B} = \{1,5,7\}$ $\overline{A} \cap \overline{B} = \{1,5,7\}$ よって $\overline{A \cup B} = \overline{A} \cap \overline{B}$

$A \cap B = \{6\}$ $\overline{A \cap B} = \{1,2,3,4,5,7,8,9\}$ $\overline{A} \cup \overline{B} = \{1,2,3,4,5,7,8,9\}$ よって $\overline{A \cap B} = \overline{A} \cup \overline{B}$