

問題

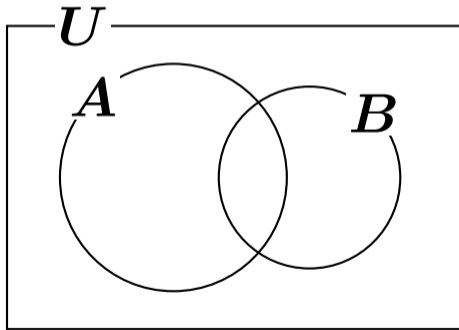
$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ を全体集合とする。

$A = \{2, 3, 4, 7, 8\}$, $B = \{4, 5, 7, 9\}$ のとき、次の集合を求めなさい。

図をかくと

$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

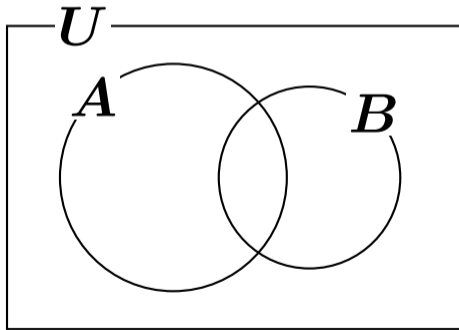
$$A = \{2, 3, 4, 7, 8\}, \quad B = \{4, 5, 7, 9\}$$



図をかくと

$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

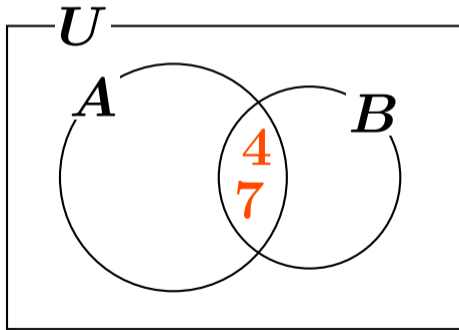
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



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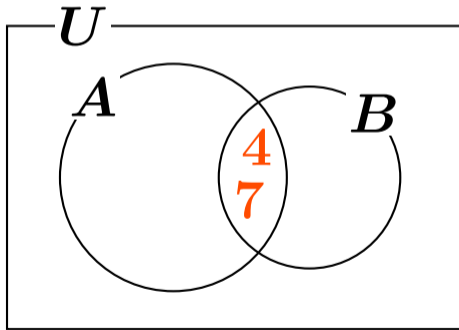
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



図をかくと

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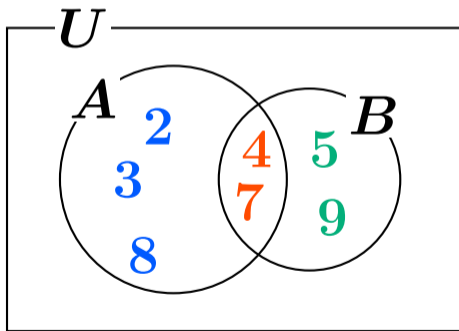
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



図をかくと

$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

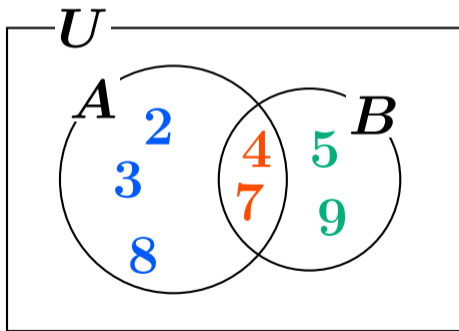
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



図をかくと

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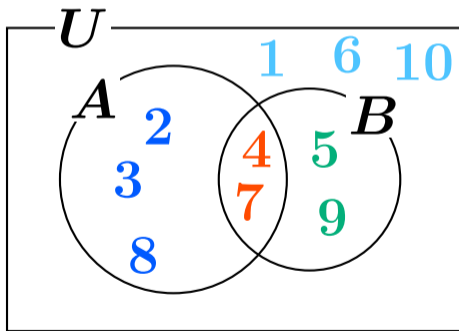
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



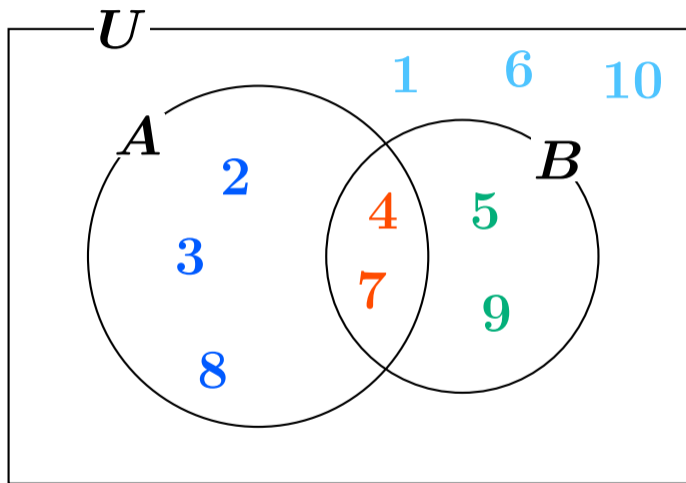
図をかくと

$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

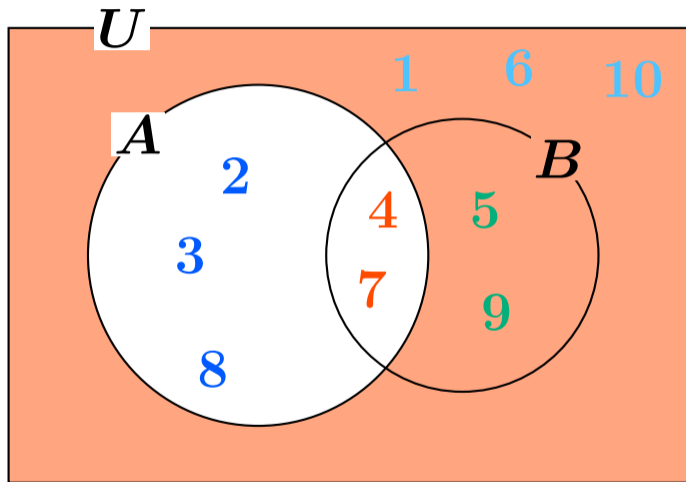
$$A = \{2, 3, 4, 7, 8\}, B = \{4, 5, 7, 9\}$$



(1) \overline{A}

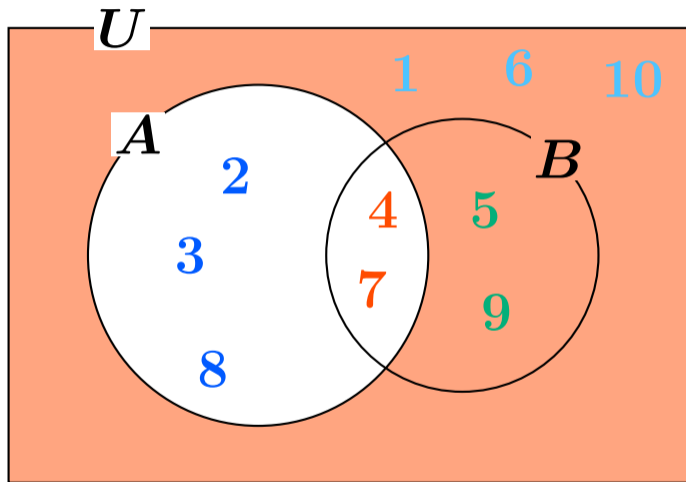


(1) \overline{A}

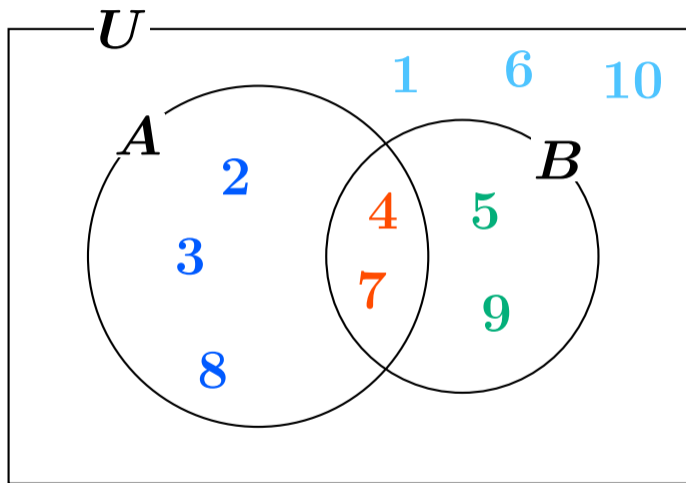


$$(1) \quad \overline{A} = \{1, 5, 6, 9, 10\}$$

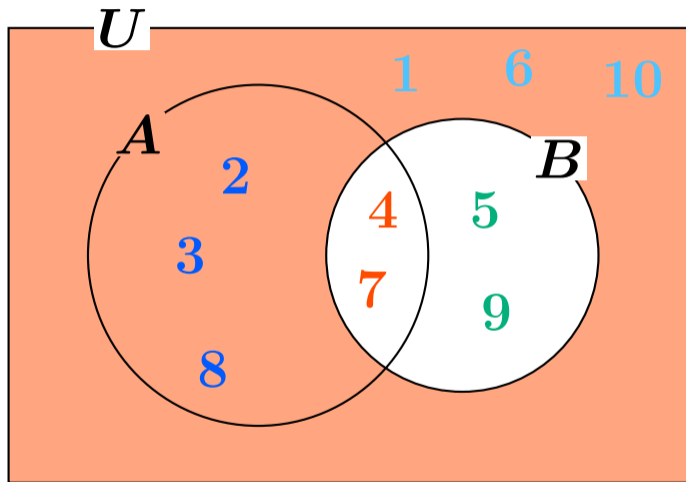
答



(2) \overline{B}

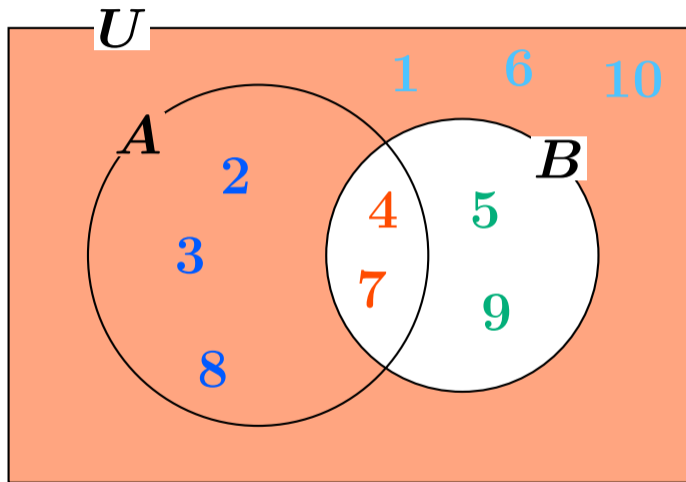


(2) \overline{B}

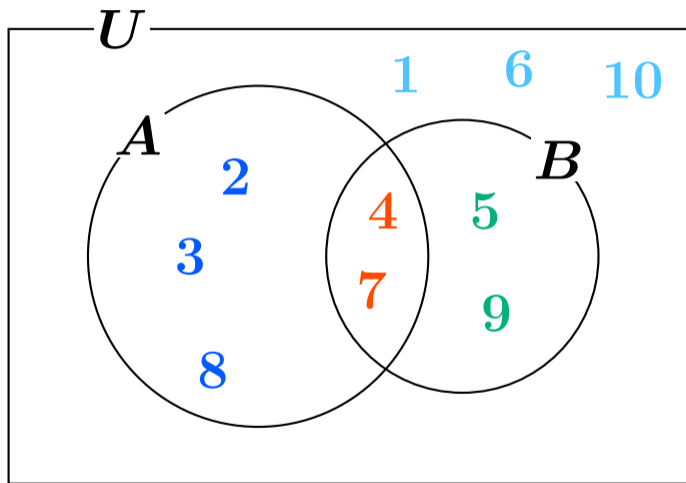


$$(2) \quad \overline{B} = \{1, 2, 3, 6, 8, 10\}$$

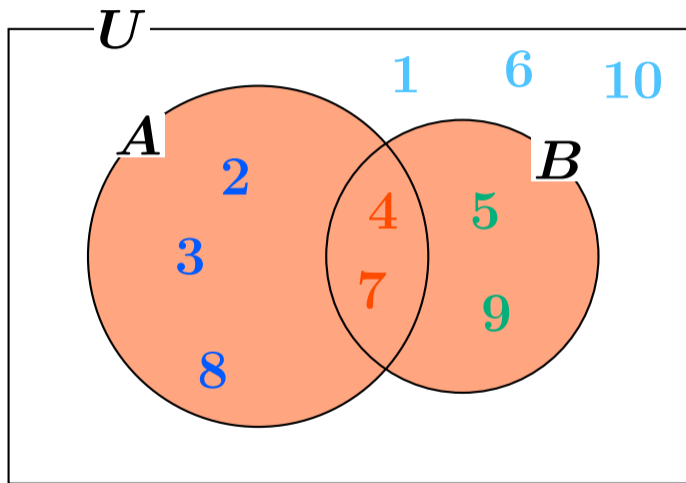
答



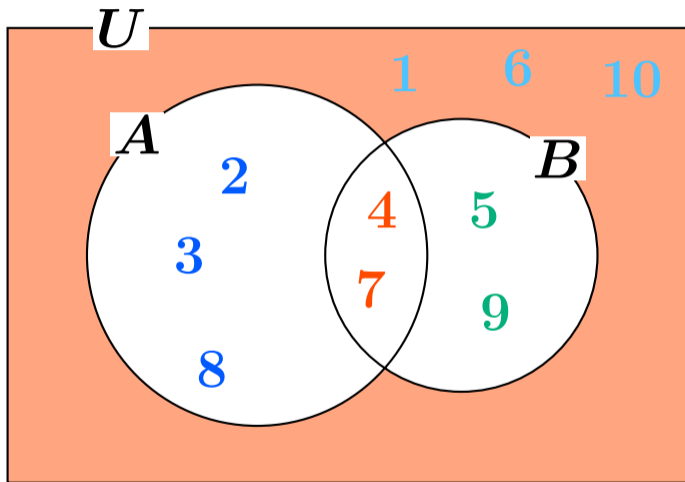
(3) $\overline{A \cup B}$



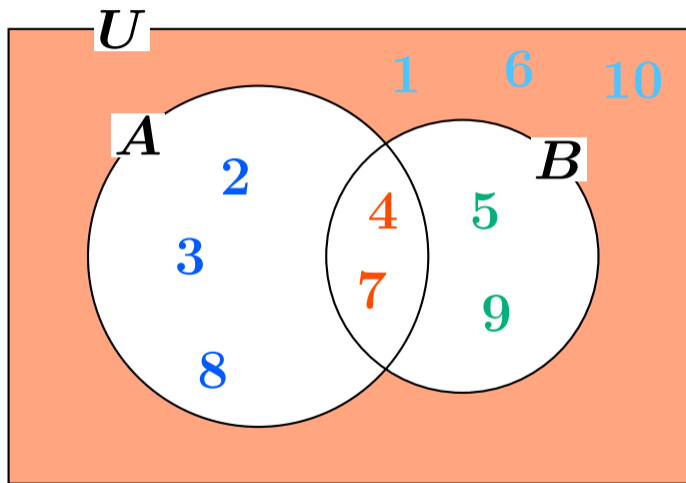
(3) $A \cup B$ はココなので



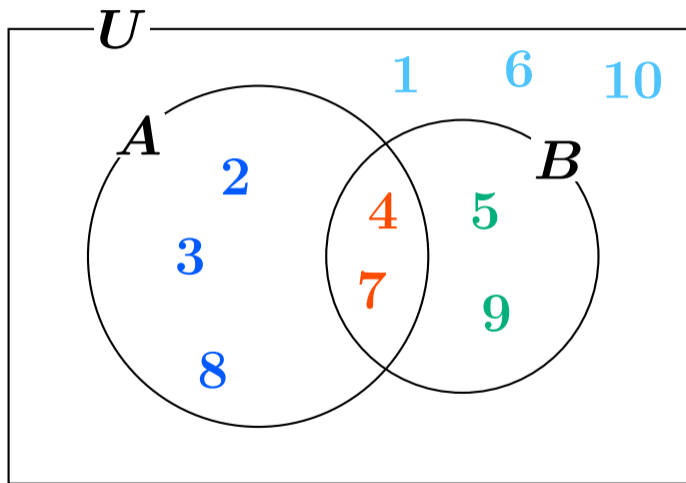
(3) $\overline{A \cup B}$ はココになるから



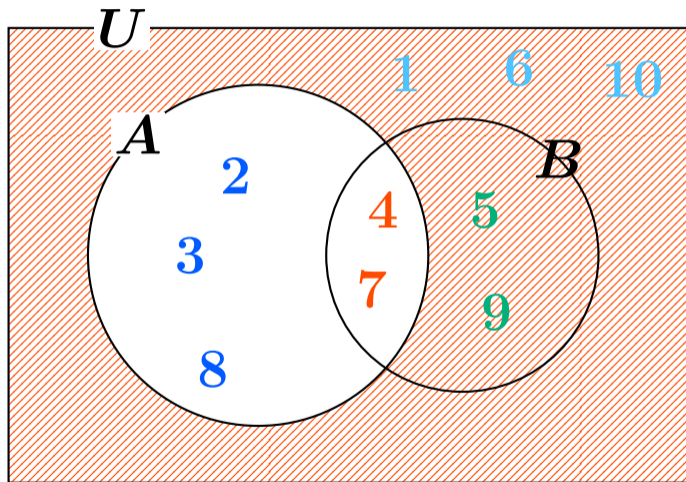
(3) $\overline{A \cup B} = \{1, 6, 10\}$ 答



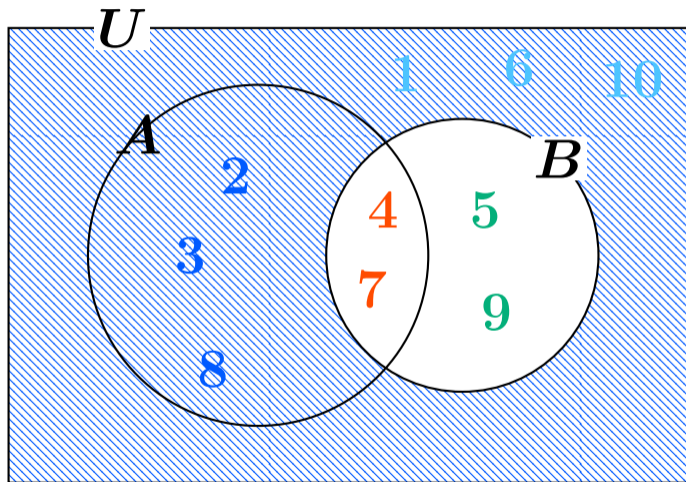
$$(4) \quad \overline{A} \cup \overline{B}$$



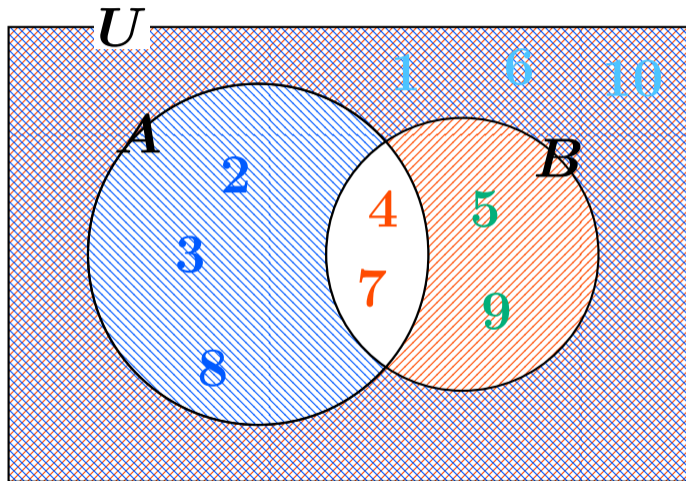
(4) \bar{A} はココ



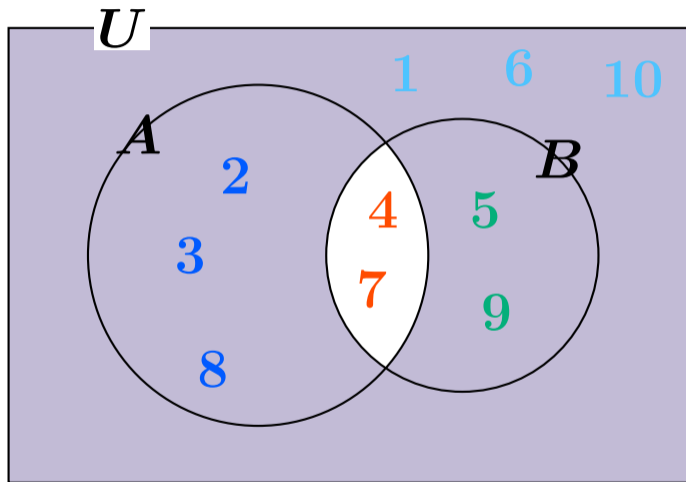
(4) \overline{B} はココ



(4) $\overline{A} \cup \overline{B}$ は赤、青どちらかで塗られた部分

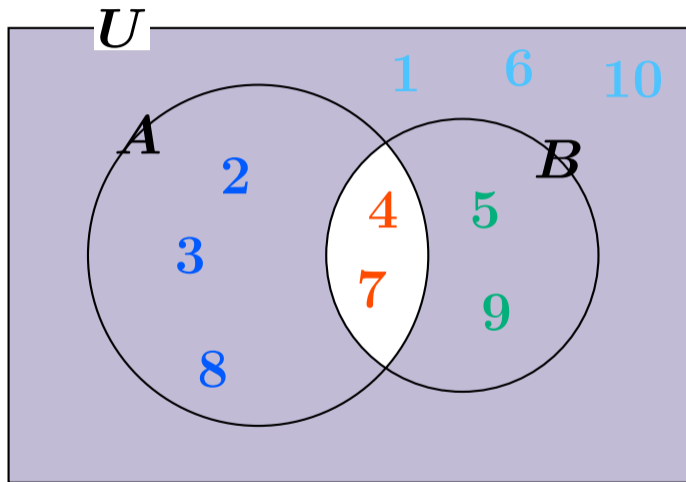


(4) $\overline{A} \cup \overline{B}$ はココになるから

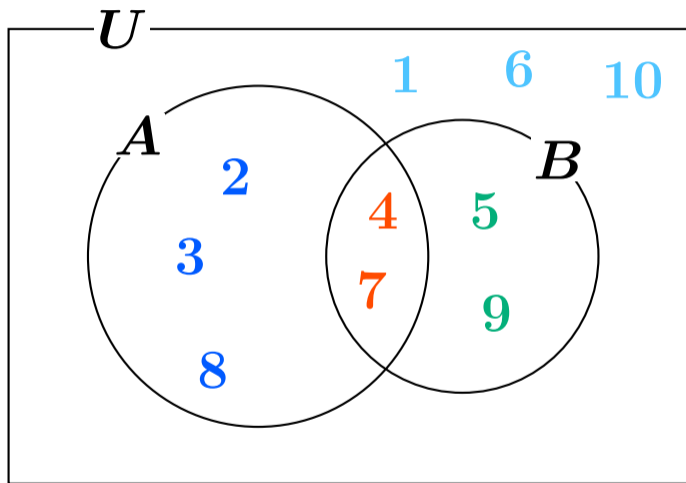


$$(4) \quad \overline{A} \cup \overline{B} = \{1, 2, 3, 5, 6, 8, 9, 10\}$$

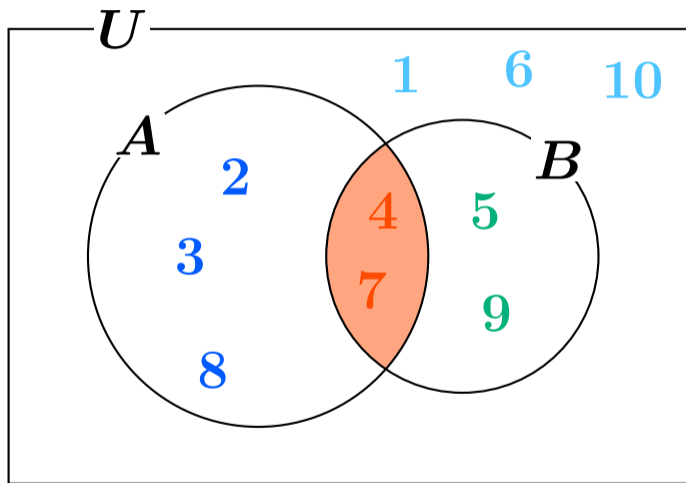
答



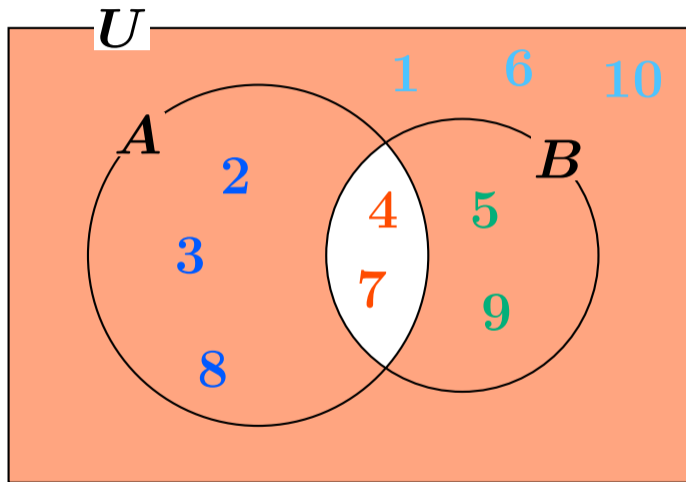
$$(5) \overline{A \cap B}$$



(5) $A \cap B$ はココなので

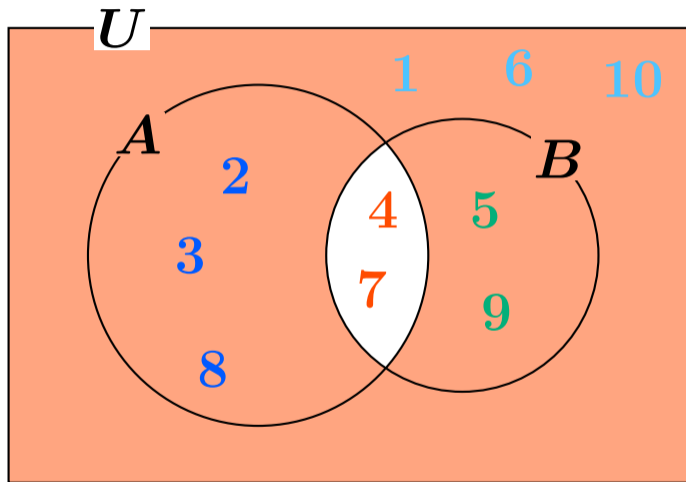


(5) $\overline{A \cap B}$ はココになるから

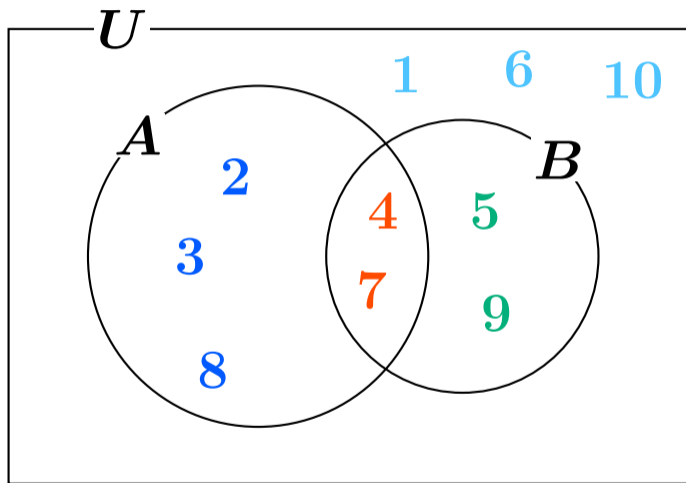


$$(5) \overline{A \cap B} = \{1, 2, 3, 5, 6, 8, 9, 10\}$$

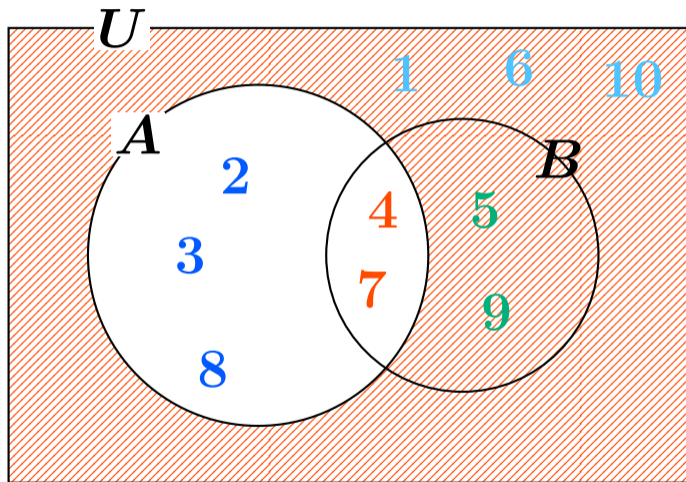
答



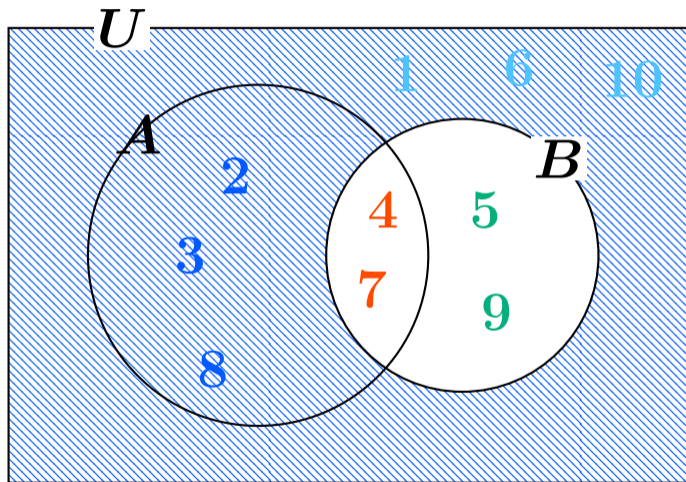
(6) $\overline{A} \cap \overline{B}$



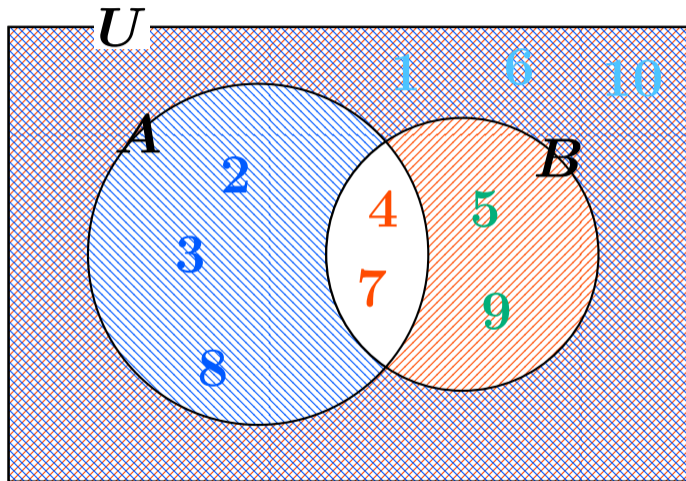
(6) \bar{A} はココ



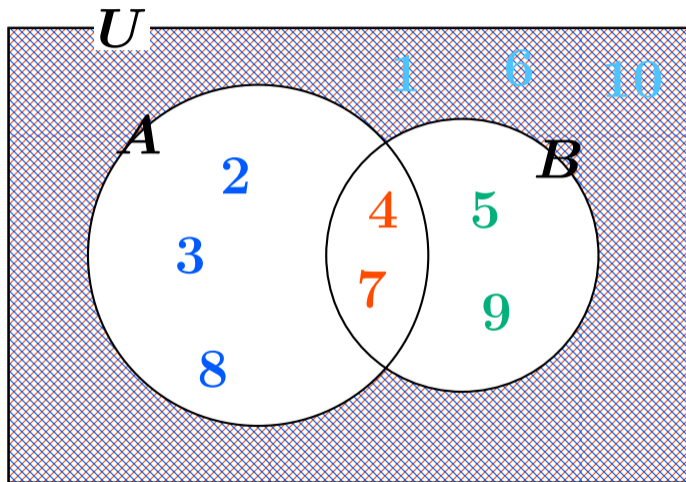
(6) \overline{B} はココ



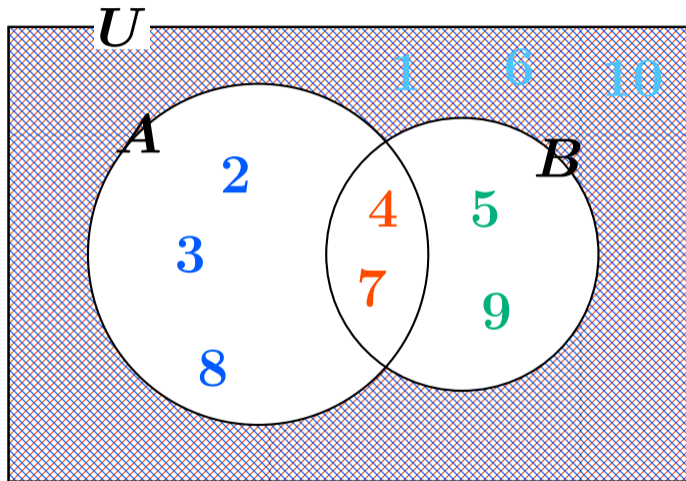
(6) $\overline{A} \cap \overline{B}$ は 赤と青 両方で塗られた部分



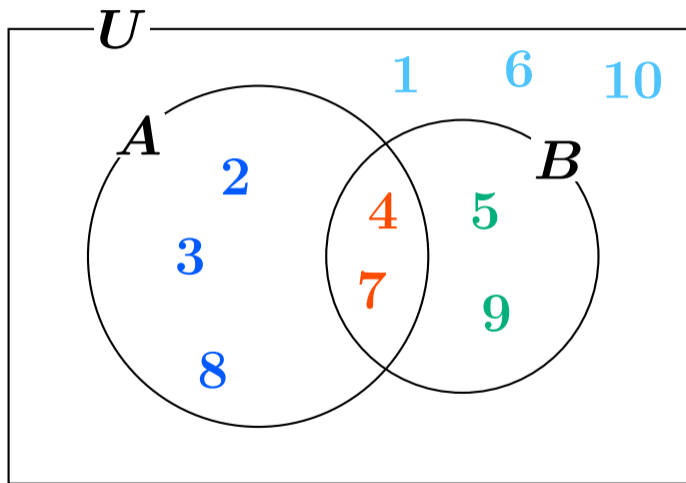
(6) $\overline{A} \cap \overline{B}$ はココになるから



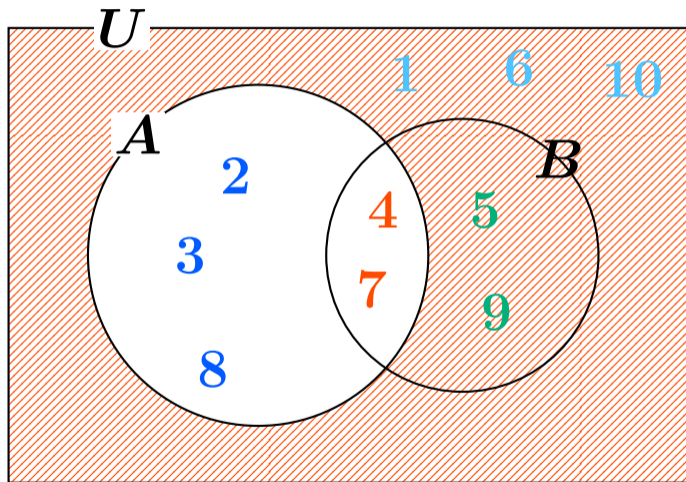
$$(6) \quad \overline{A} \cap \overline{B} = \{1, 6, 10\} \quad \boxed{\text{答}}$$



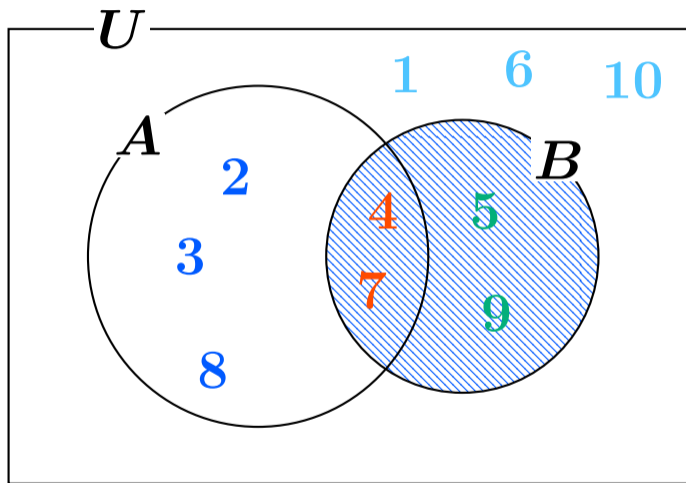
(7) $\bar{A} \cap B$



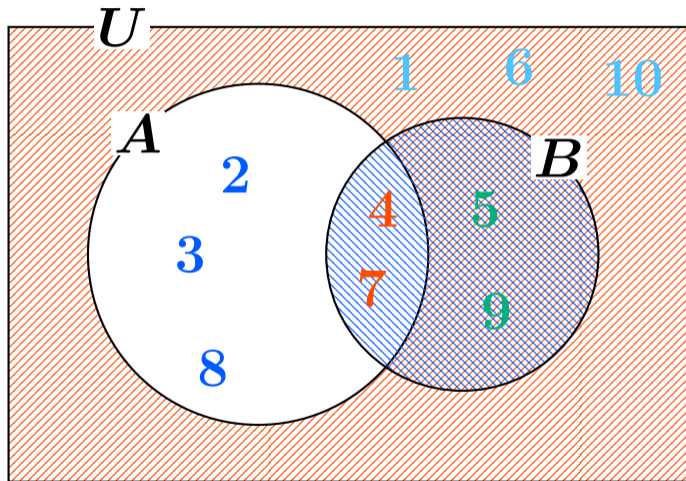
(7) \bar{A} はココ



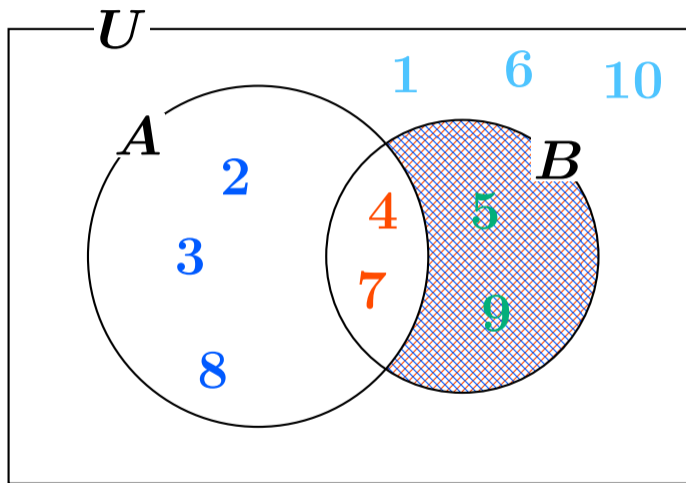
(7) B はココ



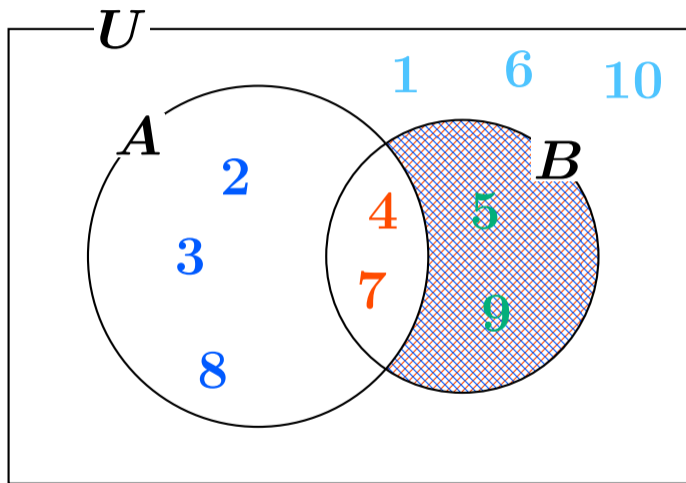
(7) $\overline{A} \cap B$ は 赤と青 両方で塗られた部分



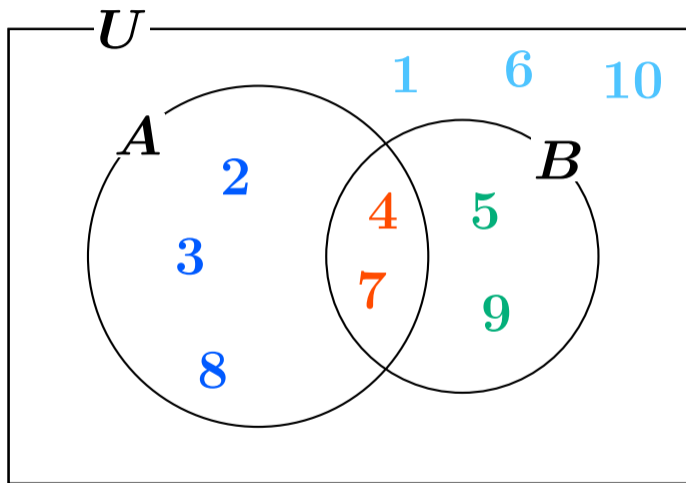
(7) $\bar{A} \cap B$ はココになるから



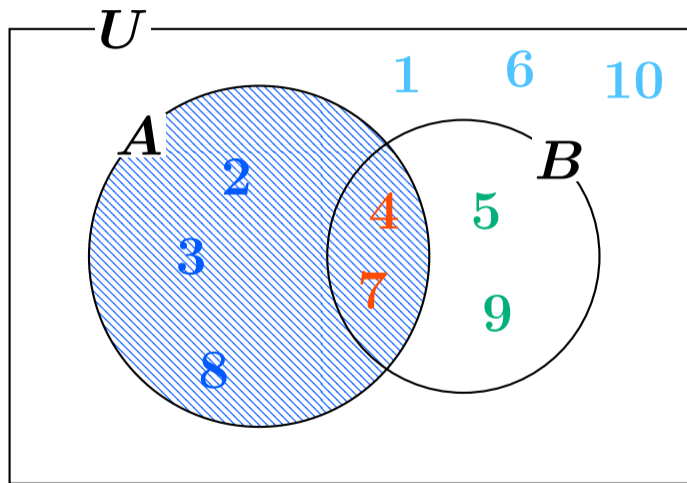
$$(7) \quad \overline{A} \cap B = \{5, 9\} \quad \boxed{\text{答}}$$



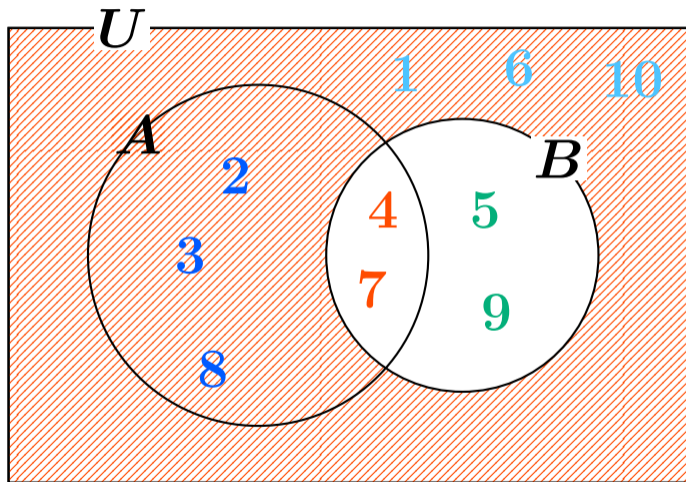
$$(8) \quad A \cap \overline{B}$$



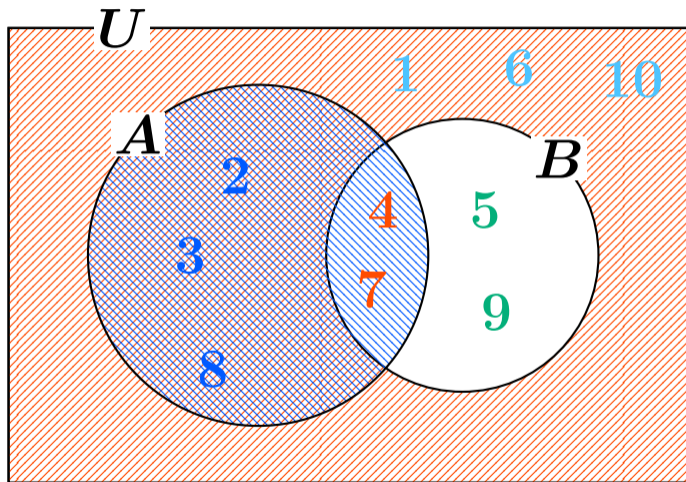
(8) A はココ



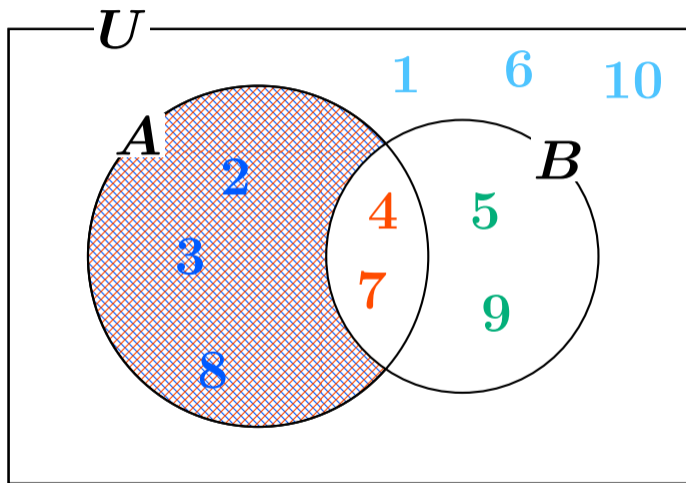
(8) \overline{B} はココ



(8) $A \cap \overline{B}$ は 赤と青 両方で塗られた部分



(8) $A \cap \overline{B}$ はココになるから



$$(8) \quad A \cap \overline{B} = \{2, 3, 8\} \quad \boxed{\text{答}}$$

