

1. Let $A = \{a, b, 1, 2\}$ and $B = \{1, 2, 3\}$. Write each of the following sets by listing the elements inside curly brackets.

(a) $A \cap B$

$$\{1, 2\}$$

(b) $A \cup B$

$$\{a, b, 1, 2, 3\}$$

(c) $A \Delta B$

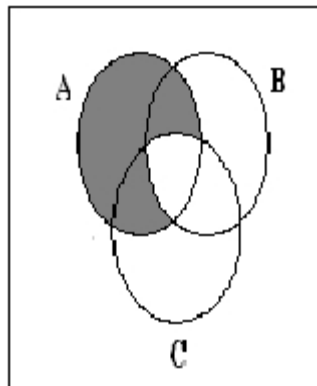
$$\{a, b, 3\}$$

(d) $A \times B$

$$\{(a, 1), (a, 2), (a, 3), (b, 1), (b, 2), (b, 3), (1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3)\}$$

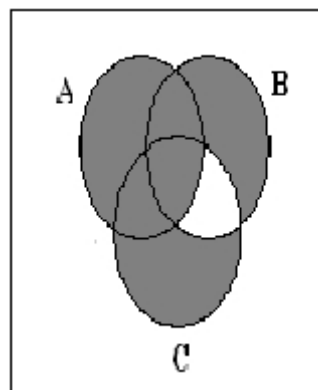
2. Shade as appropriate on the given Venn Diagram. (You do not need to show any steps, but if you do, make sure your final answer is clearly indicated.)

(a)



$$A - (B \cap C)$$

(b)



$$A \cup (B \Delta C)$$

1. Let $A = \{a, b, 1, 2\}$ and $B = \{1, 2, 3\}$. Write each of the following sets by listing the elements inside curly brackets.

(a) $A \cap B$

$$\{1, 2\}$$

(b) $A \cup B$

$$\{a, b, 1, 2, 3\}$$

(c) $A \Delta B$

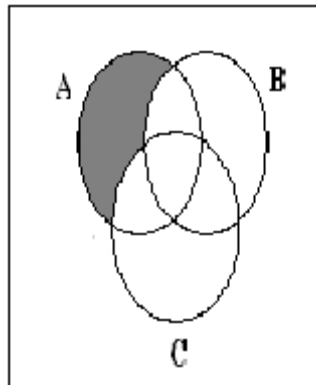
$$\{a, b, 3\}$$

(d) $A \times B$

$$\{(a, 1), (a, 2), (a, 3), (b, 1), (b, 2), (b, 3), (1, 1), (1, 2), (1, 3), (2, 1), (2, 2), (2, 3)\}$$

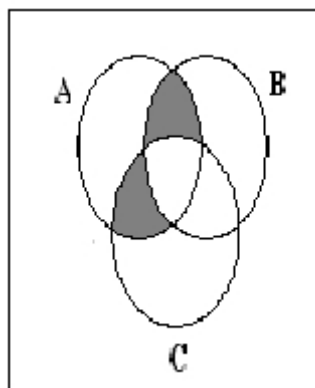
2. Shade as appropriate on the given Venn Diagram. (You do not need to show any steps, but if you do, make sure your final answer is clearly indicated.)

(a)



$$A - (B \cup C)$$

(b)



$$A \cap (B \Delta C)$$