

7. What is the power set of A?

$$\{\emptyset, \{0\}, \{3\}, \{9\}, \{0,3\}, \{0,9\}, \{3,9\}, \{0,3,9\}\}$$

8. What is $A \times B$? What is $B \times A \times B$?

$$A \times B = \{(0, -1), (0, 1), (0, 3), (0, 6), (0, 11), (3, -1), (3, 1), (3, 3), (3, 6), (3, 11), (9, -1), (9, 1), (9, 3), (9, 6), (9, 11)\}$$

9. What is $|A|$? What is the cardinality of the power set of B?

$$|A| = 3$$

cardinality of the power set of B is $2^5 = 32$

10. Draw a Venn diagram that includes A and B. Label the areas that correspond to $A \cup B$, $A \cap B$, $A - B$, and $B - A$.

