

Math 270 - Basic Discrete Mathematics
Practice Quiz on Section 6.1

Solutions

Directions: Answer the problems given below.

1. Let $A = \{1, 2, 3, 4, 5\}$ and $B = \{2, 4, 6, 8\}$. Express each of the following sets in set-roster notation:

a. $A \cup B = \{1, 2, 3, 4, 5, 6, 8\}$

b. $A \cap B = \{2, 4\}$

c. $B - A = \{6, 8\}$

2. Express the power set $\mathcal{P}(\{a, b, c\})$ in set-roster notation.

$$\{\emptyset, \{a\}, \{b\}, \{c\}, \{a, b\}, \{a, c\}, \{b, c\}, \{a, b, c\}\}$$

3. Is $\{1, 3, 6, 9\}$, $\{2, 4, 5\}$, $\{7, 10\}$ a partition of the set $\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$? Why or why not? A_1 A_2 A_3 \wedge

No, because the union of the three sets does not include the element 8: $A_1 \cup A_2 \cup A_3 \neq A$.