Math2660 Worksheet 1

(1) Does \{1, 2, 3, 4, 5\} = \{3, 4, 5, 2, 1\} ? Why?

(2) Does \{1, 2, 3, 4, 5\} = \{1, 2, 2, 3, 3, 4, 5, 5\} ? Why?

(3) Evaluate \(|A|\) where \(A = \{1, 2, 2, 3, 3\}\).

(4) Does \{1, 2, 3\} = \{1, \{2\}, 3\} ? Why?

(5) Evaluate \(|B|\) where \(B = \{1, 2, \{2\}, \{2, 3, 4, 5, 6, 7\}\}\).

(6) Is \(2 \in \{1, 2, 3, 4, 5\}\)?

(7) Is \(\{2\} \in \{1, 2, 3, 4, 5\}\)?

(8) Write the set \(\{3x + 1 : x \in \mathbb{Z}, |x| \leq 2\}\) in set roster notation.

(9) Is \(2 \in \{5x + 12 : x \in \mathbb{Z}\}\) ? Why?

(10) Is \(4 \in \{5x + 1 : x \in \mathbb{Z}\}\) ? Why?