

308, Quiz 1 Solutions, September 3, 2015

1. Write the sets $A = \{-1, -2, -3, \dots\}$ and $B = \{-3, -2, -1, 0, 1, 2, 3\}$ in the form $\{x \in \mathbb{Z} : p(x)\}$, where $p(x)$ is a property concerning x .

$$A = \{x \in \mathbb{Z} : x < 0\} \text{ and } B = \{x \in \mathbb{Z} : -3 \leq x \leq 3\}$$

2. Let $A = \{\emptyset, \{\emptyset\}, \{\{\emptyset\}\}\}$. Write down $\mathcal{P}(A)$.

$$\mathcal{P}(A) = \{\emptyset, \{\emptyset\}, \{\{\emptyset\}\}, \{\{\{\emptyset\}\}\}, \{\emptyset, \{\emptyset\}\}, \{\emptyset, \{\{\emptyset\}\}\}, \{\{\emptyset\}, \{\{\emptyset\}\}\}, \{\emptyset, \{\emptyset\}, \{\{\emptyset\}\}\}\}.$$