1. Let the set of digits \( D = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\} \) be the universe. Let \( E = \{0, 2, 4, 6, 8\} \) and \( T = \{0, 3, 6, 9\} \). Find each of the following sets.

   (a) \( E \cup T \)
   Answer: \( E \cup T = \{0, 2, 3, 4, 6, 8, 9\} \)

   (b) \( E \cap T \)
   Answer: \( E \cap T = \{0, 6\} \)

   (c) \( \neg E \)
   Answer: \( \neg E = \{1, 3, 5, 7, 9\} \)

2. Using the sets above, are the following Boolean statements True or False?

   (a) \( 3 \in D \)
   Answer: \( 3 \in D \) is True.

   (b) \( 3 \in E \)
   Answer: \( 3 \in E \) is False.

   (c) \( 3 \not\in T \)
   Answer: \( 3 \not\in T \) is False.

3. Using the sets above, what is:

   (a) \( |D| \)
   Answer: \( |D| = 10 \)

   (b) \( |E| \)
   Answer: \( |E| = 5 \)

   (c) \( |T| \)
   Answer: \( |T| = 4 \)