

Read the top part of the handout §5.0 Set Theory Transition down through *After your reading*, do the selected problems parts from the variant of ER 5.1.8. Then do the below problems.

- . Let the universe be  $\mathbb{N}$  and consider the follow subsets of  $\mathbb{N}$ .

$$A_1 = \{x \in \mathbb{N} : x \geq 7\}$$

$$A_2 = \{x \in \mathbb{N} : x \text{ is odd}\}$$

$$A_3 = \{x \in \mathbb{N} : x \text{ is a multiple of } 3\}$$

$$A_4 = \{x \in \mathbb{N} : x \text{ is even}\}$$

Recall using the roster method  $\mathbb{N} = \{1, 2, 3, 4, 5, 6, 7, \dots\}$ .

Use the roster method to list all of the elements of each of the below 5 sets.

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1.

$$A_1 \cap A_2 = \textit{cut this out and put solution here}$$

2.

$$A_1 \cup A_2 =$$

3.

$$(A_1 \cup A_2)^C =$$

4.

$$(A_1)^C \cap (A_2)^C =$$

5.

$$A_1 - A_4 =$$