Honest Effort

3.1.2 b) False. Set A does not has a set with the element 15.

d) True. A set is always a subset itself.

e) False. B does not contain a empty set.

f) True. We have infinite amount of integer

3.1.5 a) $A = \{ x \in \mathbb{Z} : -2 \leq x \leq 2 \}$
$|A| = 5$

c) $C = \{ x \in \mathbb{Z} : -3 \leq x \leq 4 \text{ and } x \text{ is odd} \}$
$|C| = 7$

3.2.1 d) False. The element 3 is not in X but a set containing the element 3 is in X

f) False. $\{1,2\}$ is not a subset of X but $\{\{1,2\}\}$ is.

j) True, $\{2,3\}$ is a element in X

i) False, 3 is not a element in X

Honest Effort

3.3.4 $P(A) = \{ \emptyset, \{a\}, \{b\}, \{a,b\} \}$
$P(B) = \{ \emptyset, \{b\}, \{c\}, \{b,c\} \}$

c) $P(A) \cap P(B) = \{ \emptyset, \{b\} \}$

d) $P(A) \cup P(B) = \{ \emptyset, \{a\}, \{b\}, \{c\}, \{a,b\}, \{b,c\} \}$

3.4.4 e) $A \cup B = A \oplus B$
$A \cup B = \{ 1,2,3,4,-1,-2,-3 \}$
$A \oplus B = \{ 1,2,3,4,-1,-2,-3 \}$
True

h) True. $\{\{0\}\}$ is a subset of the Power set of C.

3.6.7 e) $C \times B = \{ \{a,b\}, \{a,c\}, \{b,b\}, \{b,c\}, \{d,b\}, \{d,c\} \}$
$B \times C = \{ \{b,a\}, \{b,b\}, \{b,d\}, \{c,a\}, \{c,b\}, \{c,d\} \}$

$(C \times B) \cap (B \times C) = \{ \{b,b\} \}$

f) $A \times B = \{ \{a,b\}, \{a,c\} \}$

$P(A \times B) = \{ \emptyset, \{a,b\}, \{a,c\}, \{a,b,a,c\} \}$

Honest Effort

3.7.3 b) No, A, B and D are not pairwise disjoint

3.7.4 a) No, for each digit i, it should include all student whose ID starts with i,

Honest Effort and Feedback Given

3.5.2 a) $(\bar{A} \cap C) \cup (A \cap C) = C$

$(\bar{A} \cap C) \cup (A \cap C)$	Start
$(C \cap \bar{A}) \cup (A \cap C)$	Commutative law
$(C \cap \bar{A}) \cup (C \cap A)$	Commutative law
$C \cap (\bar{A} \cup A)$	Distributive law
$C \cap (A \cup \bar{A})$	Commutative law
$C \cap (U)$	Complement law
C	Identity law

3.7.3 c) No, B, D and E are not pairwise disjoint,