Problem Set 2

1

1.0/1.0 point (graded)

Which of the following are true?

- [ ] $\{0\} = \emptyset$
- [x] $\{0, 1, 2\} = \{2, 0, 1, 1\}$
- [ ] $\{\{0\}, 1\} = \{0, \{1\}\}$

✔

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2

0/1 point (graded)

Which of the following set pairs intersect?

- [x] $\{1, 2, 3\}$ and $\{2, 4, 6\}$
- [x] {prime numbers} and {even numbers}

- [x] $\{x \in \mathbb{R} \mid x^2 \leq 4\}$ and $[2, 7)$
- [ ] $\emptyset$ and $\emptyset$
- [ ] $\{\emptyset, 1, 2\}$ and $\emptyset$

Submit You have used 3 of 3 attempts

3

5.0/5.0 points (graded)

For any two sets A and B, add $\subseteq$ or $\supseteq$ to make the following statements true.

Hint: Venn Diagrams may help.

- $A \cap B$ ___ A

⊆ ▼ ✔

- $A \cup B$ ___ A

⊇ ▼ ✔

- $A - B$ ___ A

⊆ ▼ ✔

- $A \cap B$ ___ $A \cup B$

⊆ ▼ ✔

- $A - B$ ___ $A \Delta B$

⊆ ▼ ✔

Submit You have used 1 of 1 attempt

4

4.0/4.0 points (graded)

Simplify the following expressions.

- $(A^c)^c$

A ▼ ✔

- $(A \Delta B) \Delta B$

A ▼ ✔

- $(\Omega \cap A) \cup (B \cap A)$

A ▼ ✔

- $(A \cup \Omega) \cap (\emptyset \cup A^c)$

A^c ▼ ✔

Submit You have used 1 of 2 attempts

5

1/1 point (graded)

Which of the following statements hold for all A?

- [x] $A \times \emptyset = \emptyset$
- [ ] $A \times \emptyset = A$
- [ ] $A \subseteq A^2$
- [ ] $A \in A^2$
- [ ] $A \times A^c = \emptyset$

Submit You have used 3 of 3 attempts

✔ Correct (1/1 point)

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