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CS 2102 - DMT1 - SPRING 2020 — LUTHER TYCHONIEVICH
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QUIZ 05

Consider the following sets: $A = \{1, 2, 4\}$, $B = \{2, 3, 5\}$, $C = \mathcal{P}(\{3, 4\})$

PROBLEM 1 Show all members of each set

1. _____ = C

2. _____ = $A \cup B$

3. _____ = $A \cap B$

4. _____ = $A \setminus B$

5. _____ = $\mathcal{P}(B) \cap C$

6. _____ = $\{x \mid (x \in \mathbb{N}) \wedge (2x \in A)\}$

7. _____ = $\{x \mid (2x \in A) \wedge (x \in B)\}$

8. _____ = $\{\{a, b\} \mid (a \in A) \wedge (b \in B) \wedge (a > b)\}$

PROBLEM 2 Answer each question

9. _____ = $|\{1, \{2, 3\}, 4\}|$

12. _____ = $3 \in C$

10. _____ = $|\mathcal{P}(A)|$

13. _____ = $\{3\} \in C$

11. _____ = $|\mathcal{P}(\mathcal{P}(\{1, 2\}))|$

14. _____ = $\{\{3\}\} \in C$