CS 2102 - DMT1 - Spring 2020 — Luther Tychonievich Practice exercise in class friday february 21, 2020

Practice 05

PROBLEM 1 Set definition

Let $A = \{1, 2, 3, 4\}$, $B = \{2x \mid (x \in \mathbb{N}) \land x < 5\}$, $C = \mathcal{P}(\{2, 3\})$. Show the full set of members in each of the following sets using curly-brace notation (not set-builder or operator-defined notation):

1. <i>B</i> =	
2. <i>C</i> =	
3. <i>C</i> =	-
4. $A \cup B =$	
5. $A \cap B =$	
6. $A \smallsetminus B =$	
7. $A \cup C =$	
8. $A \cap C =$	
9. $\left\{ x \mid x \in A \land x \in B \right\} =$	
10. $\left\{ x \mid x \in A \lor x \in B \right\} =$	
11. $\left\{ x \mid x \in A \land 2x \in A \right\} =$	
12. $\left\{ x \mid (x \in B) \land (\forall y \in A . x > y) \right\} =$	
13. $\left\{ X \mid (X \in C) \land (\exists y \in X . y \in B) \right\} =$	

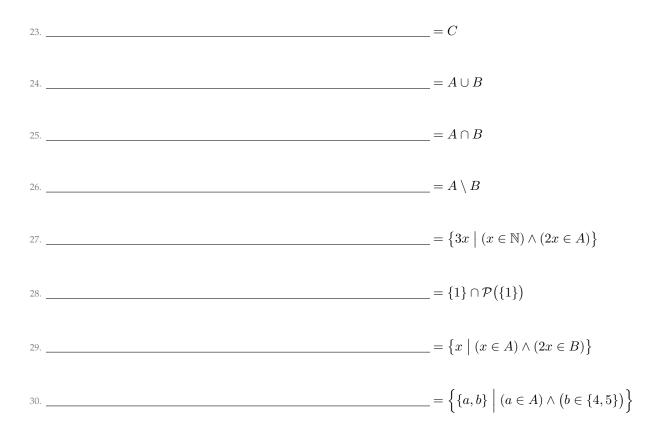
PROBLEM 2 Set definition

Let $A = \{0, 2, 3\}$, $B = \{x^2 \mid (x \in \mathbb{N}) \land x^2 < 10\}$, and $C = \mathcal{P}(\{4, 9\})$. Show the full set of members in each of the following sets using curly-brace notation (not set-builder or operator-defined notation):

PROBLEM 3 Fall 2019 Quiz 12 questions on sets

Consider the following sets: $A = \{8, 4, 5\}, B = \{2, 3, 4\}, C = \mathcal{P}(\{8, 2\})$

PROBLEM 4 Show all members of each set



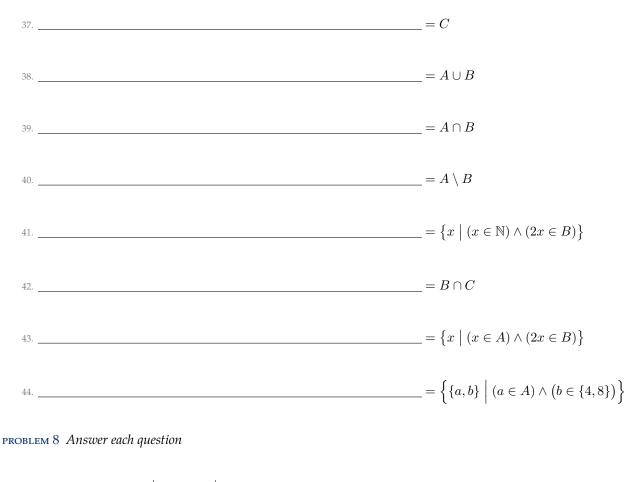
PROBLEM 5 Answer each question

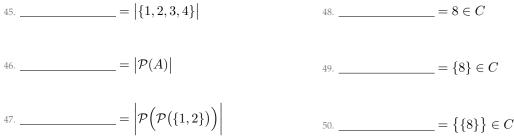


PROBLEM 6 Fall 2019 Final Quiz questions on sets

Consider the following sets: $A = \{2, 4, 8\}, B = \{1, 2, 4\}, C = \mathcal{P}(\{1, 2\})$

PROBLEM 7 Show all members of each set





Want more practice? See http://www.cs.virginia.edu/luther/DMT1/S2020/set-practice.html