

Name: _____ No. _____

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MATH 206

Quiz 1: 9/6/23

You may use a scientific/4-function calculator. You have 10 minutes. There are 10 points possible.

1 (4 pts) For $A = \{2, 3, 5, 7, 8\}$, $B = \{1, 3, 4, 5, 6, 9\}$, and universal set $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$, evaluate:

(a) $A \cup B$

(b) $A \cap B$

(c) $A - B$

(d) \overline{A}

2 (3 pts) Suppose $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$ is the universal set and $A = \{2, 3, 4, 9\}$, $B = \{1, 2, 3, 7\}$, and $C = \{3, 5, 9\}$. Draw a Venn diagram that places each number appropriately.

3 (3 pts) Suppose R is a relation on S , $R = \{(1, 1), (1, 3), (2, 2), (2, 3), (3, 1), (3, 2), (3, 3)\}$, and $S = \{1, 2, 3\}$. Does this relation satisfy the transitive property? Why or why not?