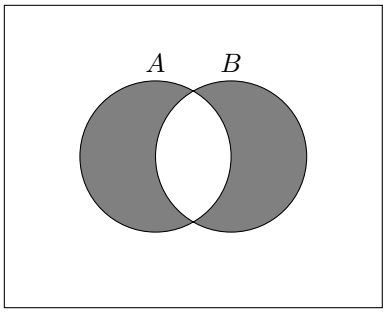
Math 101 - Quiz 1
Show all of your work

Name: _____

1. Find $n(A)$, for $A = \{232, 233, 234, 234, \ldots, 1091\}$.

2. Find the sum $232 + 233 + 234 + 235 + \cdots + 1091$.

3. Write a symbolic description of the shaded area. Use the symbols $A, B, \cup, \cap, -$, and $'$ as necessary.



4. If A has 20 elements, B has 30 elements, and $A \cup B$ has 40 elements. How many elements does the shaded area in problem 3 have? Explain your answer clearly.

5. Give a negation of the statement '$x > 12$ or $x \leq 5$'. Do not use a slash symbol.

6. Let p represent a false statement and let q represent a true statement. Find the truth value of

$$\sim (\sim p \vee \sim q)$$

7. Construct the truth table for the statement

$$r \rightarrow (p \wedge \sim q)$$