

University of South Carolina
Math 221: Math for Elementary Educators
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Section 001
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Quiz 6

1. Let $A = \{\text{all natural numbers divisible by } 2\}$ and $B = \{\text{all natural numbers divisible by } 3\}$ with universal set $U = \{\text{all natural numbers}\}$.

a. Is $A \subseteq B$? Why or why not?

b. Describe $A \cap B$.

c. Describe $B - A$.

d. Describe \overline{A} .

2. Your instructor has had far too much to drink and is disgracing himself by shouting mathematical falsehoods. Sober him up by stating the negation of each claim and proving that the negation is true.

a. Every integer is negative.

b. If a number ends in 3, then it is divisible by 3.

3. Prove the following statement by proving its contrapositive.

If x^2 is odd, then x is odd.