

Quiz 2

Math 105

Summer 2020

You have 30 minutes to complete this quiz (**this includes the time it takes to scan and upload it**). You may not use a calculator, your notes, the textbook, or any other resources. Write your solutions on a separate sheet of paper, and when you're finished, first check your work if there is time remaining, then scan the quiz and upload it to Canvas. If you have a question, don't hesitate to ask — I just may not be able to answer it.

1. (8 points) Let p be the statement “if I eat an apple every day, then I am healthy”. Write the converse, inverse, and contrapositive of p . Which one is logically equivalent to p ?

2. (8 points) Consider the following argument:

1. You are healthy if you eat an apple every day.

2. You eat an apple every day.

Conclusion: You are healthy.

Using the statements q and r , where q is “You eat an apple every day” and r is “you are healthy”, rewrite this argument in symbolic form. Don’t prove it, though.

3. (8 points) If $A = \{1, 2, 3\}$ and $B = \{3, 4, 5\}$, find $A \cap B$ and $A \cup B$.