

Quiz 1

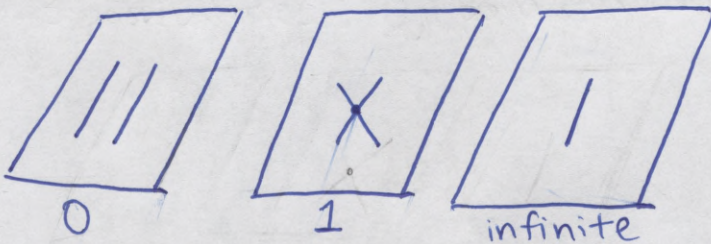
AUGUST 29, 2019

Name (Last, First)

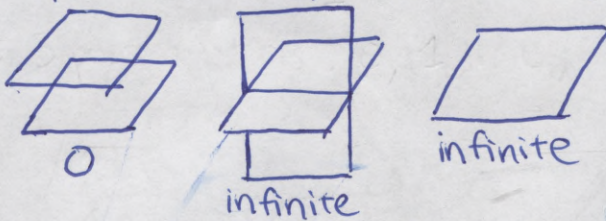
Answer Key

1. (6pts) In this problem, **two** or **three** do not necessarily mean "two distinct" or "three different".
- a. There are two lines on a plane. How many intersections could they have? Can there be exactly two intersection points? List all possibilities. (Draw the picture of such situations. For b and c, you do not need to draw pictures.)
- b. There are two planes in a (3d) space. How many intersections could they have? List all possibilities.
- c. There are three planes in a (3d) space. How many intersections (of all three) could they have? List all possibilities.

a. 3 possibilities: 0, 1 point, infinite intersections



b. 3 possibilities: 0, infinite (line), infinite (plane)



c. 4 possibilities: 0, infinite (as a line), infinite (as a plane), 1 (as a point)

2. (4pts) What are you majoring or planning to major? Why do you want to do such a major?
Lastly, why do you take Math 54 (please try to make another reason than 'it is mandatory')?