

Title: Math 017 Quiz #3, Range 7.1-7.3

Name: _____

Section: _____

1. In a survey of 100 college students, it was found that

44 like Math	40 like English
51 like Chemistry	19 like Math and English
16 like Chemistry and English	18 like Chemistry and Math
13 like all three.	

How many like none of these three? (5pts)

Solution: Use Venn Diagram. The answer is 5.

2. A card is drawn from a well-shuffled deck of 52 cards.

(a) Write out the event E : "It is a 2 or a Queen" in set notation. (2pts)

(b) Find the probability of E. (3pts)

Solution: The sample space is

$$S = \{x | x \text{ is a card}\}.$$

In this sample space, all the outcomes are equally likely.

(a) The event can be written in the following form:

$$E = \{h2, c2, s2, d2, hQ, cQ, sQ, dQ\}$$

and $n(E) = 8$.

(b) $P(E) = \frac{8}{52} = \frac{2}{13}$.