CHAPTER 2 and 3

1. What is the probability that a fair coin lands heads two times out of three flips?

A) 2/3 B)1/3 C) 3/8 D)1/2 E)other

2. What is the probability that a positive two-digit number less than 100 picked at random has distinct digits?

A) 81/90 B) 90/100 C)9/90 D) 72/100 E)other

3. Suppose that two cards are drawn without replacement from a well-shuffled deck of 52 cards. What is the probability that both cards have numbers (therefore exclude aces, kings, queens, and jacks) and that the numbers on the cards are the same.

A) 2/52 B) 9/221 C) 81/2704 D)18/663 E)other

4. A math teacher gave her class two tests. 25% of the class passed both tests and 42% of the class passed the first test. What percentage of those who passed the first test also passed the second test? A) 75% B) 90% C) 10% D) 25% E) 60%

5- What is the expected value of your grade in a 4 choice quiz when you answer all questions randomly where a wrong answer has -1/3 (negative) score and the correct answer has +1 (positive) score?

A) 2/3 B) 1/3 C) 3/4 D) 0 E) Other

6- What is the probability of answering at least 1 question wrong, out of a total of 20 questions in a multiple choice test with 4 choices for each question where only one choice is the correct answer and you take a guess at each question?

A) $20(1/4)(3/4)^{19}$ B) $1-(1/4)^{20}$ C) 1/2 D) 0 E) Other

7- Two identical urns contain balls. One of the urns has 6 red balls and 3 blue balls. The other urn has 5 red balls and 8 blue balls. An urn is chosen at random and a ball is drawn at random from this urn. If the ball turns out to be red, what is the probability that this is the urn with 6 red balls?

A) 26/41 B) 2/3 C) 13/41 D) 15/41 E) Other