

Math 153 - Quiz 5

September 28, 2017

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (6 points) A large jar contains 5 blue marbles, 8 red marbles, and 2 green marbles. A single marble is selected at random.

- (a) What is the sample space for this probability experiment?
- (b) Are the outcomes in your sample space equally likely?
- (c) What is the probability of each outcome?
- (d) Are your probabilities theoretical, experimental, or subjective?
- (e) If B is the event of selecting a blue marble, then what is \overline{B} ?

2. (3 points) In studying the effectiveness of a certain test preparation course, the following data were collected from a random sample of people who took the test.

	Passed Test	Failed Test
Took Test-Prep Class	137	43
Did not take Test-Prep Class	213	105

- (a) Based on the data, what is the probability that a person passes the test?
 - (b) Based on the data, what is the probability that a person takes the test-prep class?
 - (c) Are your probabilities above theoretical, experimental, or subjective?
3. (1 point) What would you tell a person who says the probability of obtaining tails on a coin flip is 50?