

## Math 112 - Quiz 9

April 26, 2017

Name key Score \_\_\_\_\_

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

1. (3 points) Which of the following are probability experiments? Circle all that apply.

- ☒ (a) A card is selected from a shuffled deck.
- ☐ (b) A cup of water is placed into the freezer.
- ☒ (c) A match is selected at random from a box of matches.
- ☐ (d) A match is lit by striking the box of matches.
- ☒ (e) A coin is flipped.
- ☒ (f) A student answers a true/false question by guessing.

2. (3 points) Consider the experiment of rolling an 8-sided die.

- (a) What is a sample space for this experiment?

$\{1, 2, 3, 4, 5, 6, 7, 8\}$

- (b) Give an example of an event. Describe it in words.

$\{2, 4, 6, 8\} = \text{EVENT OF ROLLING AN EVEN NUMBER.}$

- (c) Determine the theoretical probability of the event you described above.

$$\frac{4}{8} = \frac{1}{2}$$

3. (4 points) Give an example of a probability that might be assigned to

- (a) an impossible event

0

- (b) a certain event

1

- (c) an event that is very unlikely, but not impossible

0.01

- (d) an event that is 5 times more likely than an event with probability 0.1

$$5(0.1) = 0.5$$