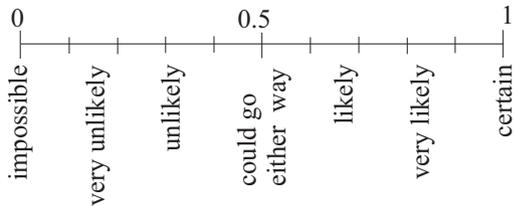*Name*: _____

1. Rate the probability of the following events, occuring, from 0 to 1, according to this scale.

(a) It will rain on the first day in December of this year.

(b) You will be hit by lightning tomorrow.

(c) Your family car will start tomorrow morning.

(d) You will pass your next maths test.

(e) You will pick the winner of the next Melbourne Cup.

(f) Next year you will walk on the moon.

Write all probabilities as fractions in Question 2

2. (a) There are 9 puppies in a litter and 4 are females. What is the probability of randomly choosing a female?

(b) What is the probability of randomly choosing a male puppy from this litter?

(c) In a bag of chocolates there are 5 peppermint, 3 caramel, 4 strawberry and 2 nougat. What is the probability of randomly choosing a caramel?

(d) After one caramel has been taken from this bag of chocolates, what is the probability of choosing another caramel?

(e) What is the probability that your birthday next year will fall on a Saturday?

(f) What is the probability that your best friend will have the same birthday as you?

3. There are 13 hearts, 13 diamonds, 13 clubs and 13 spades in a deck of cards.

(a) What is the probability of randomly drawing a heart from a deck of cards? Write answer as a fraction in its simplest form.

(b) If a person is dealt a hand of 12 cards, how many hearts would be expected in the hand?

4. Bennie is the full forward for his football team. Before the season started he had 400 shots at goal and kicked 280 goals.

(a) Based on these figures, what is the probability (as a decimal) that Bennie will, when he shoots for goal, kick a goal?

(b) If Bennie has 10 shots at goal in a game, based on this probability, how many goals would expect to kick?

(c) If Bennie has 180 shots at goal during the season, how many goals would he expect to kick?

5. Tim is tree planter. On one property he planted 500 trees and found one year later that 400 had survived.

(a) Based on these figures, what is the probability (as a decimal) of a tree surviving?

(b) On another property he plants 3400 trees. How many would be expected to survive?