Name: _____ Date: _____

BLM 11–4

Chapter 11 Problems of the Week

1. You are on a committee to plan the half-time show for your school basketball tournament. As part of the show, you will give mini beanbags to several fans. The diameter of each circular beanbag is 5 cm. At half-time, these fans will stand on the end lines and toss the bags toward the centre of the gym floor where your school logo is painted in a circle. The diameter of the circle is 3 m. In the middle of the logo is a black circle exactly the size of the beanbag. The fan who lands a beanbag closest to the black circle wins a prize. There is always a winner.

a) What is the probability of a bag landing exactly on the small circle?

b) Would you make it a rule that a fan had to land the bag there to win? (Assume that each spot on the floor is an equally likely landing space.)

2. A deck of cards has ten cards of each of five colours for a total of 50 cards.

- The yellow cards are even numbered, starting at 2 and going up by twos to 20.
- The pink cards are odd numbered, starting at 1 and going up by twos to 19.
- The orange and blue cards each have a value of three.
- The purple cards each have a value of seven.

What is the probability that a card, chosen at random, will have

a) a value greater than five?

b) a value greater than seven?

3. In a dice game, a player rolls two six-sided dice. The player can either choose the product or sum of the roll for that turn. To win, a player must score a total of 102 points. What are the fewest numbers of rolls needed to win the game?

4. A secret two-digit integer has an even digit in the tens place and an odd digit in the units place. The number is greater than 45. What is the probability you will guess the correct number that has each of these properties? Express your answer as a fraction.

5. Two spinners each have six equal sectors numbered one to six. What is the probability of obtaining a difference of one when both spinners are spun? Express your answer as a fraction.

6. Just before your weekend camping trip, you hear on the radio that there is a 30% chance of rain on Saturday and a 70% chance of rain on Sunday.

a) What do the forecasters mean by saying that there is a 70% chance of rain?

b) Calculate the probability that it will rain on both days.

c) Would you still go camping? Explain.