Name: _____ Date: _____

Chapter 6 Problems of the Week

1. The table shows data about radio listening time for young adults between the ages of 12 and 17.

Category	% of Radio Listening Time
Contemporary	24.8
Country	8.5
Easy Listening	0.9
Golden Oldies/Rock	14.2

a) Estimate each percent as a fraction out of 100.

b) What total out of 100 do these categories of music represent?

c) What is the total out of 100 of the missing categories of music?

2. The students at Anytown School have the following features: $\frac{100}{300}$ have blue eyes, $\frac{150}{300}$ are boys, and $\frac{200}{300}$ play hockey.

Hint: Assume there are only two eye colours at the school.

a) Predict the number of brown-eyed girls who play hockey. Explain your thinking.

b) Is it possible that none of the brown-eyed girls play hockey? Explain your answer.

3. a) Estimate the fraction of the total flag that the field on each end of the Canadian flag represents. Explain your thinking.

b) What fraction of the total flag do you think the maple leaf occupies? Explain your thinking.

4. a) Divide 254 by 9. What is the remainder? Find ten other three-digit numbers that when divided by 9 leave this same remainder.

b) Write a statement about three-digit numbers that are divided by 9 and have a remainder of 2.

c) Divide 253 by 9. What is the remainder? Find ten other three-digit numbers that when divided by 9 leave this same remainder.

d) Write a general statement about the numbers in part c).

5. Assume that human pregnancy lasts about 38 weeks. At two weeks, the human embryo is about the size of a kidney bean. At three weeks, the embryo has a fingerprint. At 18 weeks, it is about 13 cm in length. At 28 weeks, the embryo has a mass of about 680 g. At 36 weeks, the lungs are well developed. Express each developmental milestone as a fraction of the total developmental period. Write each fraction in lowest terms. Design a table to organize your results.

6. a) Billy lives on a street where the house numbers go up to 10 000. His house number is the largest number divisible by each of the numbers 4, 6, 8, and 9. What is Billy's house number?

b) Jan lives on the same street. Her house number is the largest number that is divisible by 4 and 6 but not 8 and 9. What is her house number?

7. Determine all the different combinations of numbers using 3, 3, 4, 4, 5, and 5 that are divisible by 3 and 4.