**BLM 7.N.5.6: Problems Involving Fractions**

Complete the following fraction problems.\*

1. Mr. Darwin owned  of a section of land and inherited  of a section when his father retired. How much land does he have now?
2. Luke walks into the convenience store to buy a snack. He has  dollars in one pocket, and  of a dollar in another pocket. The drink he wants costs  dollars. Find the difference between the money he has and the money he needs.
3. Andrea studied for three-quarters of an hour and Marcia studied for one-third of an hour. What was the total time the girls studied? Who studied longer, and for how much longer?
4. A farmer has 8 fields of equal size. He plants 4 fields with wheat and 2 fields with barley. Write fractions in two different ways to represent the wheat and barley fields. What fraction of the fields has neither wheat nor barley?
5. Ella ordered three large pizzas for a party. One and one-half pepperoni pizzas and two-thirds of a pineapple pizza were eaten. Was there more than 1 large pizza left over? Explain how to estimate the answer. Show how you solved the problem.
6. Mr. Gazan’s gas tank was seven-eighths full when he left home. He used three-fourths of a tank of gas on his errands. What fraction of a tank of gas was left? Show how to estimate the answer, and how to solve the problem.
7. Megan was cooking. Her recipe called for the following liquids:  litre oil and   
    litre milk. How much liquid did the recipe call for altogether? Explain how to solve this problem mentally in two different ways.
8. Edwin went on a five-day fishing trip with his uncle. Three-eighths of the fish they caught were perch and one-sixth were pickerel. The rest of their catch was jackfish. Express the amount of jackfish they caught as a fraction.

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\* Source: Manitoba Education and Training. *Grades 5 to 8 Mathematics: A Foundation for Implementation.* Winnipeg, MB: Manitoba Education and Training, 1997. Adapted from pages E–302 to E–309.

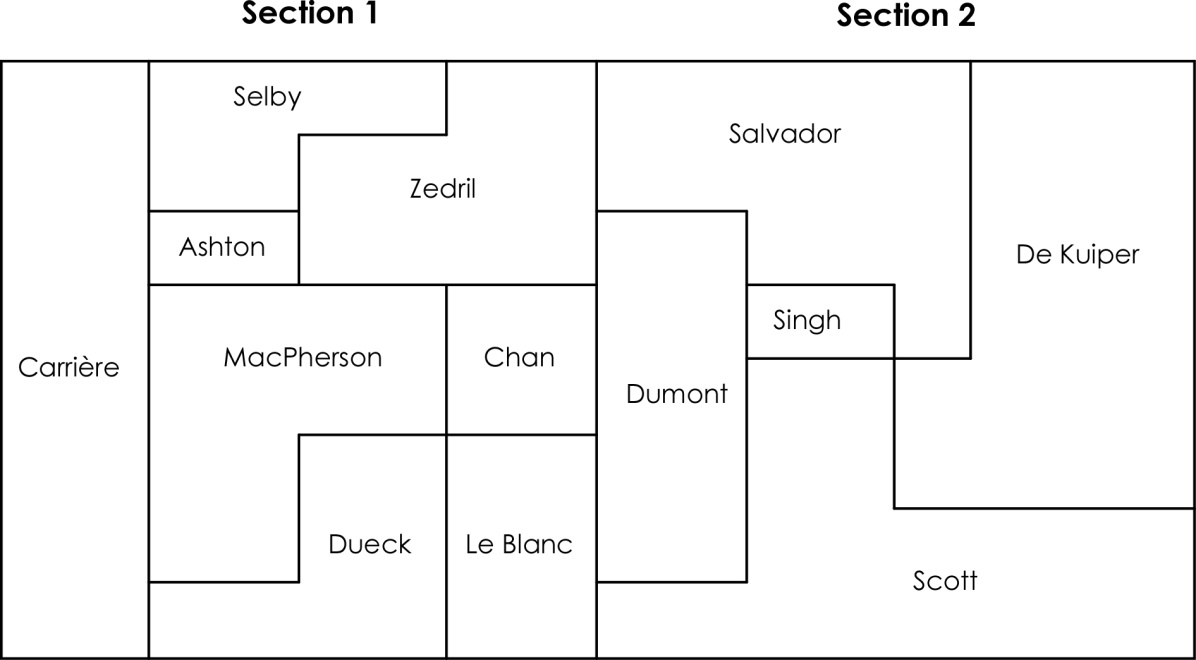
*(continued)*

**BLM 7.N.5.6: Problems Involving Fractions (continued)**

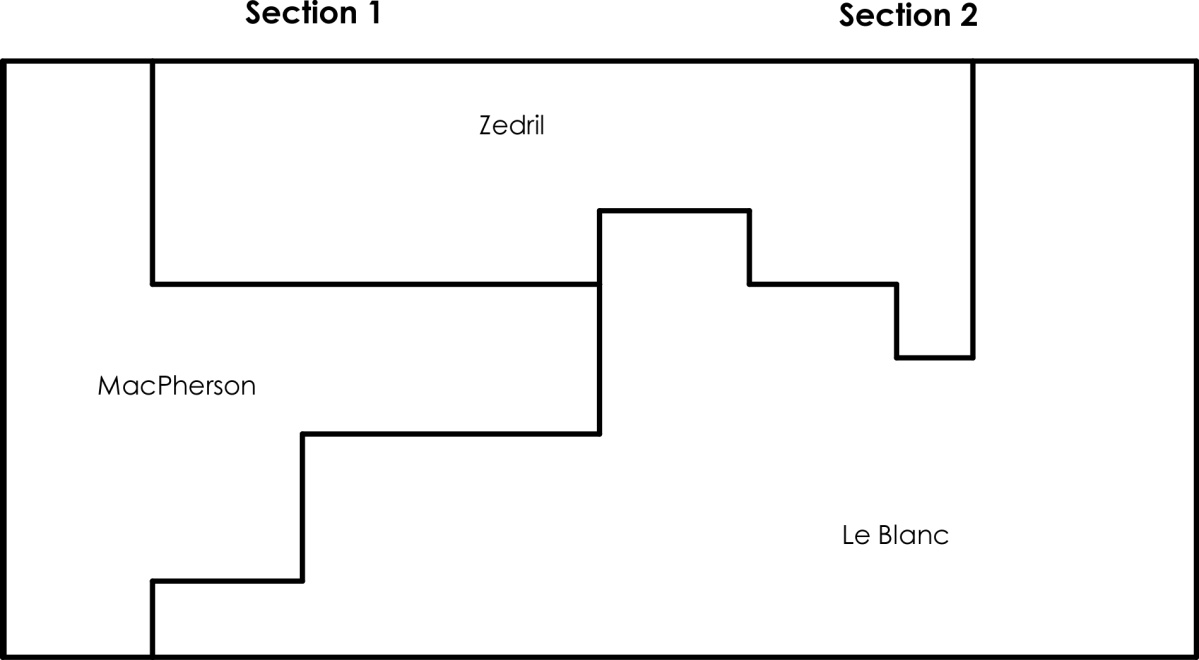
9. The map below shows land ownership in two sections of farmland in the Red River Valley Township (a section is a square measure of land used by pioneers). Last year, there was a flood in the township, and several of the neighbours wished to sell their land and move away. Three of the other landowners bought the land that was for sale, in such a way that the following statements are true:

* Each landowner can walk all the way around the family farm.
* One landowner owns the equivalent of one section.
* Each of the other two landowners owns the equivalent of a half section.
* Each former owner sold his or her entire property to one person.

Who might the new owners be, and where would the new ownership lines be? Explain the strategies you used to arrive at your answer.



A possible student response follows.



*(continued)*

**BLM 7.N.5.6: Problems Involving Fractions (continued)**

10. The Eye of Horus was used as the fraction system in Ancient Egypt. Parts of the eye were assigned values based on halves. The largest part has a value of , the next section has a value of  of  or , and so on to . Various fractions could be recorded by combining the symbols. For example, a value of  would be represented by combining the areas of the symbol worth  The entire eye represented a value of 1. If you add the value of all the fractional parts, is this correct?

Images of the Eye of Horus fractions are readily available online.

*Sample Websites:*

Barile, Margherita. “Eye of Horus Fractions.” *MathWorld.* 1999–2012. A Wolfram Web Resource, created by Eric W. Weisstein.

<http://mathworld.wolfram.com/EyeofHorusFraction.html>.

GreatScott.com. “Eye of Horus Fractions.” *Hieroglyphs*. 1998–2011.

<www.greatscott.com/hiero/eye.html>.

Lawrence, Snezana. “Eye of Horus Fractions.” *Maths Is Good for You!*

<www.mathsisgoodforyou.com/topicsPages/egyptianmaths/horusfractions.htm>.