Lesson 4: Equivalent Ratios

Classwork

Example 1

The morning announcements said that two out of every seven 6^{th} graders in the school have an overdue library book. Jasmine said, "That would mean 24 of us have overdue books!" Grace argued, "No way. That is way too high." How can you determine who is right?

Exercise 1

Decide whether or not each of the following pairs of ratios is equivalent.

- If the ratios are not equivalent, find a ratio that is equivalent to the first ratio.
- If the ratios are equivalent, identify the positive number, c, that could be used to multiply each number of the first ratio by in order to get the numbers for the second ratio.

a. $6:11$ and $42:88$

____ Yes, the value, c, is _____

____ No, an equivalent ratio would be _____

b. $0:5$ and $0:20$

____ Yes, the value, c, is _____

____ No, an equivalent ratio would be _____

Exercise 2

In a bag of mixed walnuts and cashews, the ratio of the number of walnuts to the number of cashews is $5:6$. Determine the amount of walnuts that are in the bag if there are 54 cashews. Use a tape diagram to support your work. Justify your answer by showing that the new ratio you created of the number of walnuts to the number of cashews is equivalent to $5:6$.