In these activities you will work together to explore ratios and equivalent ratios. After completing each activity, discuss and/or present your findings to the rest of the class.

Activity 1 [Page 1.3]

1. For each of the following, describe the shapes in the initially stated ratio. Then predict how the numbers of shapes will change in the new ratios. Finally, check your answers using the TNS activity.

   a. The ratio is 1 to 5.

   b. The ratio is 6 to 1.

   c. The ratio is 1:1.

2. *Equivalent ratios* are ratios formed by multiplying or dividing each quantity in a given ratio by a common positive number. The arrows above the line on page 1.3 change the ratio.

   Suppose you set the ratio 4 circles to 3 squares.

   a. Use the lower arrow to create a new ratio; record the ratios you see. Are these ratios equivalent? Why or why not?

   b. Is 8:7 equivalent to 4:3? Why or why not?

3. Leave the original ratio at 4:3. Use the TNS activity to help you answer each question. Then explain how you could answer the question without the TNS activity.

   a. If you have 16 circles, how many squares will you have?

   b. If you have 18 squares, how many circles will you have?

Activity 2 [Page 2.2]

1. For any ratio equivalent to 2:3, is the number of circles divided by 2 the same as the number of squares divided by 3? Explain why or why not.

2. Suppose the ratio was 5 to 3. If there were a total of 120 circles and squares, how many squares would there be? Explain how you found your answer.