

Ratios, Tables, and Graphs

A **ratio** is a comparison of two quantities. You can represent ratios in different ways.

EXAMPLE A

There are 7 boys for every 12 girls in a grade 6 classroom. Write the ratio of boys to girls in 3 different ways.

You can write a ratio of the number of boys to the number of girls with the word “to”: 7 to 12.

You can write a ratio comparing the number of boys to girls with a colon: 7 : 12.

You can write the number of boys to girls as a fraction. Write the number of boys on top: $\frac{7}{12}$.

Ratios can be shown in a table.

EXAMPLE B

The table represents the ratio of boys to girls. It shows equivalent ratios for 7 boys to 12 girls.

Boys	7	14	21	28	35
Girls	12				

Step 1: Look at the third column with 14 boys. Find the factor by which to multiply 7 to get 14.

The factor is 2 because $7 \times 2 = 14$

Step 2: Multiply 12 girls by 2.

$12 \times 2 = 24$

Step 3: Write 24 in the third column.

Continue in this way for each column of the table to fill in the table.

Solution:

Boys	7	14	21	28	35
Girls	12	24	36	48	60

Ratios, Tables, and Graphs (continued)

EXAMPLE C

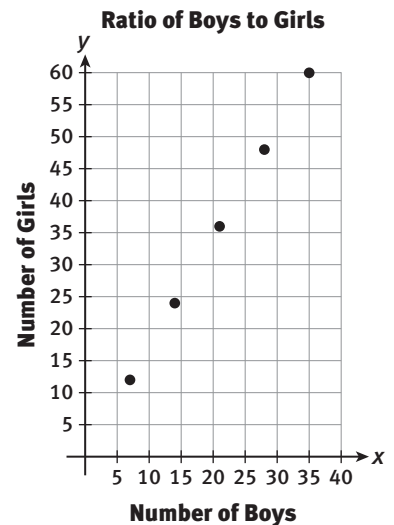
A graph can be used to represent the ratio of boys to girls.

Let x represent the number of boys. Let y represent the number of girls.
Graph the completed table from Example B.

Step 1: Let x represent the number of boys. Let y represent the number of girls.
Write ordered pairs (x, y) for each column in the table.

$(7, 12)$, $(14, 24)$, $(21, 36)$, $(28, 48)$, $(35, 60)$

Step 2: Label the graph on the axes. Write a title for the graph. Plot the points.



PRACTICE

Write each ratio in three ways.

- There are 4 cats for every 3 dogs.
- There are 5 seats for each table.
- Sienna can run 2 miles in 14 minutes. Complete the table.

Miles	2			
Minutes	14			

- Use the grid below to graph the table of miles to minutes. Label the axes and give a title to the graph.

