Ratios and Measurement

Lesson 1 Ratio Language and Order

Standards 6.RP.A.1

Learning target I can describe a ratio in the order named.

Materials Counters, tape-diagram space, rulers, measurement conversion chart, graph paper.

Lesson Flow 50 Minutes

0–5 Activate prior knowledge. Read the learning target. Ask students what they already know about ratio language and order. Use a quick model or estimate to make their starting ideas visible.

5–17 Teach and model. A ratio compares two quantities multiplicatively. In a:b, a names the first quantity and b names the second. Divide both terms by a common factor to simplify, while keeping the labels and order. Work through the two examples on the attached instruction page. Have students name the first step before showing it.

17–22 Guided practice. Revisit worked Example 2 with its solution covered. Students propose the next step and explain why it is valid; uncover and compare with the worked solution.

22–45 Independent classwork. Assign the attached 10 questions in order. Check items 1–3 for entry-level understanding, 4–6 for connected procedures, 7–8 for representation and explanation, and 9–10 for application or justification. Ask students to use the instruction-page notes area or extra grids for longer work.

45–50 Check understanding. Use classwork question 10 as an exit discussion: A tray has 12 red tiles and 24 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue. Compare the result with the answer key and ask a student to defend the method.

Support and Extension

Support Model item 1 together with the listed tools, then have students attempt item 2 independently. Watch the order of ratio labels, part-to-whole denominators, and scaling only one quantity.

Extension Ask students to solve a final item another way, draw a second representation, or create a related problem with a checked answer.

Next step Record which students can explain the target independently. Begin the next teaching session with a brief correction for any recurring error.

Name _____ Date _____

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Learn and Discuss

A ratio compares two quantities multiplicatively. In a:b, a names the first quantity and b names the second. Divide both terms by a common factor to simplify, while keeping the labels and order.

Example 1 A tray has 7 red tiles and 2 blue tiles. Write the red-to-blue ratio in simplest form.
Solution 7:2. Keep red first; divide 7:2 by 1.
Example 2 A tray has 40 red tiles and 25 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue.
Solution 8:5; 8/5 times as many. Keep red first; divide 40:25 by 5.

Classwork Show Your Work

Complete the 10 problems on the following page. Refer to the examples, draw models, and check your results.

My Notes or Second Method

Lesson 1 Ratio Language and Order

Name _____ Show calculations, models, and units.

1. A tray has 2 red tiles and 5 blue tiles. Write the red-to-blue ratio in simplest form.

2. A tray has 7 red tiles and 3 blue tiles. Write the red-to-blue ratio in simplest form.

3. A tray has 2 red tiles and 6 blue tiles. Write the red-to-blue ratio in simplest form.

4. A tray has 10 red tiles and 25 blue tiles. Write the red-to-blue ratio in simplest form.

5. A tray has 20 red tiles and 24 blue tiles. Write the red-to-blue ratio in simplest form.

6. A tray has 14 red tiles and 4 blue tiles. Write the red-to-blue ratio in simplest form.

7. A tray has 18 red tiles and 12 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue.

8. A tray has 16 red tiles and 6 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue.

9. A tray has 40 red tiles and 35 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue.

10. A tray has 12 red tiles and 24 blue tiles. Write the red-to-blue ratio in simplest form and complete: there are ___ times as many red as blue.

Ratio Language and Order

Ratios and Measurement

1. 2:5
Reasoning Keep red first; divide 2:5 by 1.

2. 7:3
Reasoning Keep red first; divide 7:3 by 1.

3. 1:3
Reasoning Keep red first; divide 2:6 by 2.

4. 2:5
Reasoning Keep red first; divide 10:25 by 5.

5. 5:6
Reasoning Keep red first; divide 20:24 by 4.

6. 7:2
Reasoning Keep red first; divide 14:4 by 2.

7. 3:2; 3/2 times as many
Reasoning Keep red first; divide 18:12 by 6.

8. 8:3; 8/3 times as many
Reasoning Keep red first; divide 16:6 by 2.

9. 8:7; 8/7 times as many
Reasoning Keep red first; divide 40:35 by 5.

10. 1:2; 1/2 times as many
Reasoning Keep red first; divide 12:24 by 12.