LESSON MAKER PRO

Ratio Matchups

Show how quantities compare.

GRADE 6 · 6.PFA.1.c

6.PFA.1.c "Represent different comparisons within the same quantity or between different quantities (e.g., part to part, part to whole, whole to whole)."

NAME _____ DATE _____

COMPARE IN ORDER

A ratio compares two quantities in the order named. Write the quantities with matching units, then simplify by dividing both parts by the same factor.

WORKED EXAMPLE

A mural uses 18 blue tiles and 12 orange tiles. Represent blue tiles to orange tiles in simplest form.

1. Write the comparison in order: 18:12.
2. Divide both parts by 6: 18 ÷ 6 : 12 ÷ 6.
3. Record the simplified ratio: 3:2.

Answer: 3:2

PRACTICE 6 problems

1 A garden has 20 tulips and 5 daisies. Represent tulips to daisies in simplest form.

ANSWER _____

2 A shelf has 20 graphic novels and 15 nonfiction books. Represent graphic novels to all books in simplest form.

ANSWER _____

3 A robotics team earns 28 points in round one and 35 points in round two. Represent round one points to round two points in simplest form.

ANSWER _____

4 A pet shelter has 5 cats and 8 dogs. Represent cats to all animals in simplest form.

ANSWER _____

5 A music app shows 7 pop songs and 28 rock songs in a playlist. Represent rock songs to pop songs in simplest form.

ANSWER _____

6 One water bottle holds 20 ounces and another holds 35 ounces. Represent the first bottle to the second bottle in simplest form.

ANSWER _____

APPLY IT Show your work

1 The coding club has 20 students making games and 25 students building robots. Represent game makers to robot builders, then game makers to all club members, in simplest form.

WORK SPACE

ANSWER _____

2 For a photo challenge, a student takes 25 landscape photos and 20 portrait photos. Represent portrait photos to landscape photos, then landscape photos to all photos, in simplest form.

WORK SPACE

ANSWER _____

CHALLENGE One step up

At a game design camp, the ratio of coders to artists is 4:5. There are 45 students altogether. How many coders and artists are there? Then represent coders to all students and artists to all students in simplest form.

WORK SPACE AND ANSWER

ANSWER KEY

Ratio Matchups

GRADE 6 · 6.PFA.1.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A garden has 20 tulips and 5 daisies. Represent tulips to daisies in simplest form.	**4:1**
2	A shelf has 20 graphic novels and 15 nonfiction books. Represent graphic novels to all books in simplest form.	**4:7**
3	A robotics team earns 28 points in round one and 35 points in round two. Represent round one points to round two points in simplest form.	**4:5**
4	A pet shelter has 5 cats and 8 dogs. Represent cats to all animals in simplest form.	**5:13**
5	A music app shows 7 pop songs and 28 rock songs in a playlist. Represent rock songs to pop songs in simplest form.	**4:1**
6	One water bottle holds 20 ounces and another holds 35 ounces. Represent the first bottle to the second bottle in simplest form.	**4:7**

PART 2 · APPLY IT

1. **4:5; 4:9** Simplify 20:25 by dividing by 5. Then compare 20 to the total of 45 and divide both parts by 5.
2. **4:5; 5:9** Simplify 20:25 by dividing by 5. Then compare 25 to the total of 45 and divide both parts by 5.

CHALLENGE

20 coders and 25 artists; coders to all students: 4:9; artists to all students: 5:9.

Accept ratios written with a colon or as a fraction when the order is correct. Because each prompt asks for simplest form, ratios should be fully reduced.