

Ratio Table Builder

Build equivalent part-to-part and part-to-whole rows.

GRADE 6 • MA.6.AR.3.3

MA.6.AR.3.3 "Extend previous understanding of fractions and numerical patterns to generate or complete a two- or three-column table to display equivalent part-to-part ratios and part-to-part-to-whole ratios."

NAME _____

DATE _____

PART 1: PRACTICE

In an equivalent ratio table, multiply or divide every part by the same number. In a three-column table, the whole equals the sum of the two parts in every row.

WORKED EXAMPLE

Complete the table. Blue tiles |
Yellow tiles | Whole 11 | 13 | ? 22 | ?
| ?

- Find the whole: $11 + 13 = 24$.
- The first part changes from 11 to 22, so multiply by 2.
- Multiply each other column by 2: $13 \times 2 = 26$ and $24 \times 2 = 48$.
- The completed second row is 22, 26, 48.

Answer: 11:13:24 and 22:26:48

PRACTICE 6 problems

1 Complete the table. Cats | Dogs 4 | 7 8 | ? ? |
21

ANSWER _____

2 Complete the table. Flour | Sugar | Whole 3
| 5 | 8 6 | ? ? ? | 15 | ?

ANSWER _____

3 Complete the table. Red beads | Green
beads | Whole 6 | 9 | 15 12 | ? | 30

ANSWER _____

4 Complete the table. Art club | Music club |
Whole 7 | 2 | 9 21 | ? ? ? | 10 | ?

ANSWER _____

5 Complete the table. Paint | Water | Whole 3 |
4 | 7 15 | ? ? ? | 12 | ?

ANSWER _____

6 Complete the table. Mango pieces | Berry
pieces | Whole 2 | 3 | 5 8 | ? | ?

ANSWER _____

APPLY IT Show your work

- 1** Part 2: Apply A student is making game badges. The ratio of gold badges to silver badges is 4:5. If there are 16 gold badges, write the equivalent part-to-part-to-whole ratio.

WORK SPACE

ANSWER _____

- 2** At a gaming tournament, a snack mix uses 3 cups of pretzels for every 2 cups of raisins. Write the part-to-part-to-whole ratio for a 30-cup batch.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Part 3: Challenge An activity club has 7 art members and 9 music members for every 16 members total. Complete both equivalent rows, then explain the scale factor for each row. Art | Music | Whole 7 | 9 | 16
35 | ? | ?? | 54 | ?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Complete the table. Cats Dogs 4 7 8 ? ? 21	14, 12
2	Complete the table. Flour Sugar Whole 3 5 8 6 ? ? ? 15 ?	10, 16, 9, 24
3	Complete the table. Red beads Green beads Whole 6 9 15 12 ? 30	18
4	Complete the table. Art club Music club Whole 7 2 9 21 ? ? ? 10 ?	6, 27, 35, 45
5	Complete the table. Paint Water Whole 3 4 7 15 ? ? ? 12 ?	20, 35, 9, 21
6	Complete the table. Mango pieces Berry pieces Whole 2 3 5 8 ? ?	12, 20

PART 2 • APPLY IT

- 16:20:36** Multiply 4 by 4 to get 16, so multiply 5 by 4 to get 20. The whole is $16 + 20 = 36$.
- 18:12:30** The original whole is $3 + 2 = 5$. Since 30 is 6 times 5, multiply both parts by 6.

CHALLENGE

35:45:80, scale factor 5. 42:54:96, scale factor 6.

Accept equivalent ratios written with colons, in a completed table, or as ordered triples. For three-column rows, accept answers only when the whole equals the sum of the two parts.