

Ratio Language and Equivalent Ratios

Grade 6 math · Test Answer Key · Standards: 6.RP.A.1, 6.RP.A.3a

Each solution shows the expected reasoning and a scoring guide. Award partial credit when the method is correct but an arithmetic slip changes the final number.

Standards: 6.RP.A.1, 6.RP.A.3a · **Level:** Grade 6

Question 1 Ratio Language (2 points)

- a. **17 : 12**
- b. Total fruit $17 + 12 = 29$, so $\frac{17}{29}$.

Scoring: 1 point for each part; reversed order earns 0 for that part.

Question 2 Reading a Tape Diagram (2 points)

- a. **3 : 5**
- b. $3 + 5 = 8$ flowers in all, so **5 : 8**.

Scoring: 1 point for each part.

Question 3 Equivalent Ratios (2 points)

- a. $35 \div 5 = 7$, and $12 \times 7 = 84$, so **35 : 84**.
- b. The greatest common factor is 21, so **2 : 3**.

Scoring: 1 point for each part.

Question 4 Missing Terms (2 points)

- a. $54 \div 9 = 6$, and $4 \times 6 =$ **24**.
- b. $35 \div 5 = 7$, and $6 \times 7 =$ **42**.

Scoring: 1 point for each part.

Question 5 Ratio Table (2 points)

Ratio 4 : 7. Flour 12 = 4×3 , so honey = 21. Honey 35 = 7×5 , so flour = 20. Flour 52 = 4×13 , so honey = 91.

Honey 21 and 91; flour 20.

Flour (cups)	4	12	20	52
Honey (tbsp)	7	21	35	91

Every column is 4 : 7.

Scoring: 2 points for all three correct values; 1 point if two are correct.

Question 6 Equivalent or Not? (2 points)

- a. Both simplify to 2 : 5, so **equivalent**.
- b. 15 : 9 simplifies to 5 : 3 and 20 : 14 simplifies to 10 : 7, so **not equivalent**.

Scoring: 1 point for each part, including a correct justification.

Question 7 Hiking Supplies (3 points)

- a. $28 \div 4 = 7$, and $3 \times 7 = \mathbf{21}$ bottles.
- b. $33 \div 3 = 11$, and $4 \times 11 = \mathbf{44}$ bars.
- c. $4 + 3 = 7$ items per group, $105 \div 7 = 15$ groups, and $4 \times 15 = \mathbf{60}$ bars.

Scoring: 1 point for each part.

Question 8 Comparing Smoothies (3 points)

Compare using 15 cups of orange juice. X: $3 : 4 = 15 : 20$. Y: $5 : 7 = 15 : 21$.

With the same orange juice, X has less mango, so its orange taste is stronger. **Blend X.**

Scoring: 1 point for equivalent ratios with a common term; 1 point for each correct comparison and conclusion.

Question 9 Animal Shelter (2 points)

$7 + 4 = 11$ parts, so $33 \div 11 = 3$ animals per part. Cats: $7 \times 3 = 21$.

21 cats.

Scoring: 1 point for finding the part size 3; 1 point for the answer.