

Grade 6 · Ratios and Ratio Language · Quiz

Common Core 6.RP.A.1, 6.RP.A.3a · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

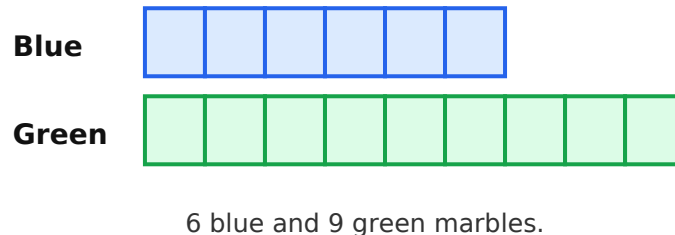
This quick quiz has 10 multiple-choice questions on writing ratios, finding equivalent ratios, and solving simple ratio problems. Choose one answer for each question, then read the explanation to learn the common mistake behind each wrong choice.

Grade 6 Common Core: 6.RP.A.1 · 6.RP.A.3a

Questions

Question 1

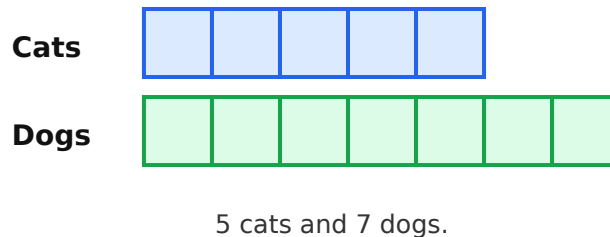
A bag has 6 blue marbles and 9 green marbles. What is the ratio of blue marbles to green marbles?



- A. 9:6
- B. 6:15
- C. 6:9
- D. 9:15

Question 2

A pet shop has 5 cats and 7 dogs. What is the ratio of cats to all pets?



- A. 5:12
- B. 5:7

- C. 7:12
- D. 12:5

Question 3

Which ratio is equivalent to 3:5?

- A. 6:8
- B. 9:15
- C. 15:9
- D. 9:12

Question 4

Find the missing number: $4:7 = 20:?$

- A. 23
- B. 28
- C. 14
- D. 35

Question 5

What is 24:36 in simplest form?

- A. 6:9
- B. 4:6
- C. 3:2
- D. 2:3

Question 6

A recipe uses 2 cups of sugar for every 5 cups of flour. How much sugar goes with 15 cups of flour?

- A. 12 cups
- B. 30 cups
- C. 6 cups
- D. 4 cups

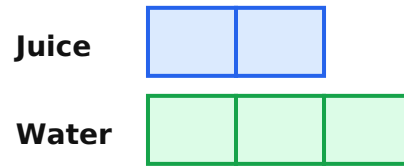
Question 7

Blue paint and red paint are mixed in the ratio 3:2. How much red paint goes with 12 cups of blue paint?

- A. 11 cups
- B. 18 cups
- C. 8 cups
- D. 9 cups

Question 8

Juice and water are mixed in the ratio 2:3. How many cups of juice are in 20 cups of the mixture?



20 cups in all

Juice and water in the ratio 2 to 3.

- A. 12 cups
- B. 8 cups
- C. 4 cups
- D. 10 cups

Question 9

Team A wins 3 games for every 2 losses. Team B wins 4 games for every 3 losses. Which team has the better record?

- A. Team A
- B. Team B
- C. Neither; they are equal
- D. It cannot be determined

Question 10

Which ratio is NOT equivalent to 5:4?

- A. 9:8
- B. 10:8
- C. 15:12
- D. 25:20

Answer key

1. **C** – Blue comes first, so the ratio is 6:9. The ratio 6:15 is blue to all marbles, a part-to-whole ratio.
2. **A** – All pets is $5+7=12$, so cats to all pets is 5:12. The ratio 5:7 compares cats to dogs, which is a part-to-part ratio.
3. **B** – Multiply both numbers by 3 to get 9:15. Adding 3 to both (6:8) is a common mistake that does not keep the ratio.
4. **D** – The first number is multiplied by 5 ($4 \times 5 = 20$), so $7 \times 5 = 35$. Adding 16 to get 23 is the additive mistake.
5. **D** – The greatest common factor is 12, so 24:36 becomes 2:3. The ratio 6:9 is equivalent but is not fully simplified.
6. **C** – Flour is multiplied by 3 ($5 \times 3 = 15$), so sugar is $2 \times 3 = 6$ cups. Adding 10 to both quantities gives 12, which is wrong.
7. **C** – Blue is multiplied by 4 ($3 \times 4 = 12$), so red is $2 \times 4 = 8$ cups. Adding 9 to both parts (11) is a common error.
8. **B** – There are $2+3=5$ parts, so each part is $20 \div 5 = 4$ cups and juice is $2 \times 4 = 8$ cups. The 12 cups is the water.
9. **A** – Written with 6 losses each, Team A is 9:6 and Team B is 8:6, so Team A wins more per loss. Team B only looks better because 4 is greater than 3.
10. **A** – The ratios 10:8, 15:12, and 25:20 come from multiplying 5:4 by 2, 3, and 5. The ratio 9:8 comes from adding 4 to both numbers, which does not preserve the ratio.

Remember:

- A ratio compares two quantities and can be written a to b , $a:b$, or $\frac{a}{b}$.
- Order matters: 3:5 and 5:3 are different ratios.
- Part-to-part ratios compare groups; part-to-whole ratios compare a group to the total.
- Equivalent ratios come from multiplying or dividing both terms by the same nonzero number.
- Ratio tables, tape diagrams, and double number lines organize equivalent ratios.