What Is a Ratio?

Understanding ratios: Applications and decisions

Name _____ **Date** _____ **Score** _____ / 8

QUICK REVIEW

A ratio compares counts in a stated order. For 4 blue and 6 gold beads, blue to gold is $4:6=2:3$, but blue to all is $4:10=2:5$. For every 2 blue, there are 3 gold preserves the same order.

Worked example

There are 6 apples and 9 pears. State apples to pears and apples to all.

1. $6\div3=2$ and $9\div3=3$, so apples to pears is $2:3$.
2. Total fruit: $6+9=15$.
3. Apples to all is $6:15=2:5$ because $15\div3=5$.
Answer: $2:3$ and $2:5$.

Practice Problems

Show your thinking.

1. A trail mix needs nuts to raisins $2:5$. Design a 28-cup batch.

2. Two club groups have girls/boys $8/12$ and $12/18$. Do they have the same ratio?

3. A mural needs blue to white paint $3:2$. There are 9 cups blue and 4 cups white. What should be added?

4. A garden has 15 vegetable beds and 10 flower beds. Find vegetables to all, then the vegetable fraction.

5. A poster claims twice as many circles as squares. It shows 8 circles and 5 squares. How many circles are missing?

6. Design a 24-flag display with striped to plain $1:3$. Give both counts.

7. Red to yellow flowers is $2:3$. A display has 10 red and 12 yellow. Keep red fixed; repair the display.

8. One banner has 6 triangles and 9 squares. Another has 10 triangles and 15 squares. Explain whether their triangle shares match.

Answer Key

1. 8 cups nuts, 20 cups raisins.
2. Yes, both $2:3$.
3. 2 cups white.
4. $3:5$; $\frac{3}{5}$.
5. 2 circles.
6. 6 striped and 18 plain.
7. Add 3 yellow flowers.
8. Yes, both $\frac{2}{5}$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. $2+5=7$ parts, so $28\div 7=4$ cups per part.
2. Nuts: $2\times 4=8$; raisins: $5\times 4=20$; total 28.

Problem 2

1. $8:12=2:3$ after dividing by 4.
2. $12:18=2:3$ after dividing by 6.

Problem 3

1. $9\div 3=3$ batches need $2\times 3=6$ cups white.
2. $6-4=2$ extra cups white; $9:6=3:2$.

Problem 4

1. Total beds: $15+10=25$.
2. $15:25=3:5$ and $15/25=3/5$.

Problem 5

1. Twice 5 squares requires $2\times 5=10$ circles.
2. $10-8=2$ circles are missing; $10:5=2:1$.

Problem 6

1. $1+3=4$ parts; $24\div 4=6$ flags per part.
2. $1\times 6=6$ striped and $3\times 6=18$ plain; $6+18=24$.

Problem 7

1. $10\div 2=5$ groups require $3\times 5=15$ yellow flowers.
2. $15-12=3$ must be added; $10:15=2:3$.

Problem 8

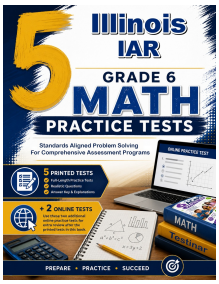
1. First share: $6/(6+9)=6/15=2/5$.
2. Second share: $10/(10+15)=10/25=2/5$.

TESTINAR

Keep Building Grade 6 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 6 books



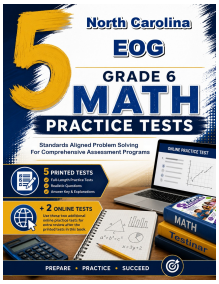
ILLINOIS IAR

5 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook



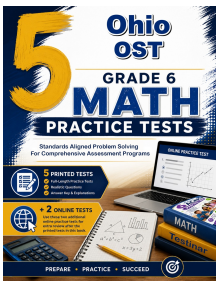
NORTH CAROLINA EOG

5 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook



OHIO OST

5 Full-Length Math Practice Tests

Build Grade 6 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 6 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/6