# Using Ratio Language

Using ratio language: Mistakes and missing information

**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.** $6$ yellow and $9$ purple ribbons are present. A student writes $3$ yellow for every $2$ purple. Correct the words.

**2.** $5$ beads for every $2$ strings. There are $15$ beads. Complete the matching sentence.

**3.** With $4$ red and $6$ blue tiles, why is $2$ red for every $5$ blue wrong? Repair one word.

**4.** $3$ cups juice for every $4$ cups water. A batch has $20$ cups water. Write the complete matching statement.

**5.** For $8$ girls and $12$ boys, a student says $2$ boys for every $3$ girls. Fix it.

**6.** $2$ green out of every $7$ counters. How many non-green counters correspond to $6$ green? Write a sentence.

**7.** Are $1$ cat for every $2$ dogs and $2$ cats for every $4$ dogs equivalent? Give numerical support.

**8.** $4$ tickets cost $12$ dollars. Is $3$ tickets per dollar correct? Rewrite it.

# Answer Key

1. $2$ yellow for every $3$ purple.
2. $15$ beads for every $6$ strings.
3. Replace blue with total tiles.
4. $15$ cups juice for every $20$ cups water.
5. $3$ boys for every $2$ girls.
6. $6$ green for every $15$ non-green counters.
7. Yes.
8. $3$ dollars per ticket, or $\frac{1}{3}$ ticket per dollar.

## Step-by-Step Solutions

Follow each calculation, then check your own work.

### Problem 1

1. Yellow to purple is $6 : 9$, not $9 : 6$.
2. Dividing both by $3$ gives $2 : 3$.

### Problem 2

1. $15 \div 5 = 3$ groups.
2. $2 \times 3 = 6$ strings; $15 : 6 = 5 : 2$.

### Problem 3

1. There are $4 + 6 = 10$ total tiles.
2. Red to all is $4 : 10 = 2 : 5$; red to blue is $4 : 6 = 2 : 3$.

### Problem 4

1. $20 \div 4 = 5$ batches.
2. $3 \times 5 = 15$ cups juice; total liquid $15 + 20 = 35$ cups.

### Problem 5

1. Boys to girls is $12 : 8$.
2. $12 \div 4 = 3$ and $8 \div 4 = 2$, giving $3 : 2$.

### Problem 6

1. Non-green per group: $7 - 2 = 5$.
2. $6 \div 2 = 3$ groups; $5 \times 3 = 15$ non-green.

### Problem 7

1. First ratio is $1/2$.
2. Second ratio is $2/4 = 1/2$; both quantities were doubled.

### Problem 8

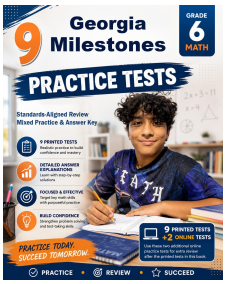
1. Dollars per ticket: $12 \div 4 = 3$.
2. Tickets per dollar: $4 \div 12 = 1/3$; reversing units reciprocates the rate.

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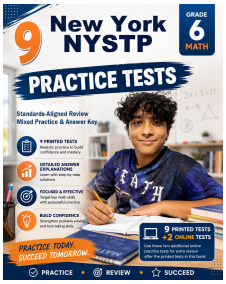

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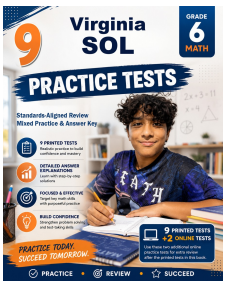

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