Measurement Units and Conversions

Apply the skill to decisions and designs

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

QUICK REVIEW

The same measurement needs more small units and fewer large units. Multiply to count smaller units; group or divide to count larger units. Useful facts: 1 m $= 100$ cm, 1 kg $= 1{,}000$ g, 1 hour $= 60$ minutes, and 1 foot $= 12$ inches.

Worked example

Convert 3 yards to feet.

1. Use 1 yard $= 3$ feet.
2. $3 \times 3 = 9$.
3. Check: $9 \div 3 = 3$ yards.
Answer: 9 feet.

Practice Problems

Show your thinking.

1. A path sign says 3 km 75 m. Which map label matches: 375 m, $3{,}075$ m, or $3{,}750$ m? Explain.

2. A shelf opening is 96 inches wide. A straight board is 8 feet 1 inch long. Does it fit without turning or trimming? If not, by how much is it too long?

3. A kitchen needs 10 cups of juice. Full jugs hold 1 quart each; small jars hold 1 cup each. Use two full jugs and as few full small jars as possible. How many jars?

4. Team A practices 1 hour 45 minutes and Team B practices 100 minutes. A coach says B practiced longer because $100 > 45$. Repair the claim.

5. A factory wants two labels for $4{,}250$ g. Label A must use the greatest number of whole kilograms plus grams. Label B must use exactly 3 kg plus grams. Find both.

6. Design a 5-L drink order in milliliters. The first jug holds $2{,}200$ mL. How much goes in the second jug?

7. Two books fit a box if their combined mass is at most 2 kg. Book A is 1 kg 300 g. The other book can be 690 g or 710 g. Which book fits with A, and by how much is it under the limit?

8. Four 2-foot strips are needed from a 2-yard roll and a 24-inch roll. Can the strips be cut without joining? Use 1 yard $= 3$ feet.

Answer Key

1. $3{,}075$ m.
2. No; too long by 1 inch.
3. 2 jars.
4. Team A practiced 5 minutes longer.
5. A: 4 kg 250 g. B: 3 kg $1{,}250$ g.
6. $2{,}800$ mL.
7. The 690-g book; 10 g under.
8. Yes: three from the first roll and one from the second.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. 3 km is $3 \times 1{,}000 = 3{,}000$ m.
2. Add the remaining meters: $3{,}000 + 75 = 3{,}075$ m.
3. $3{,}750$ m would have 750 m after the kilometers, not 75.

Problem 2

1. $8 \times 12 = 96$ inches for the whole feet.
2. The board is $96 + 1 = 97$ inches.
3. $97 - 96 = 1$ inch more than the opening.

Problem 3

1. One quart is 4 cups.
2. Two full jugs provide $2 \times 4 = 8$ cups.
3. $10 - 8 = 2$ more cups, so use two one-cup jars.

Problem 4

1. Compare both totals in minutes: 1 hour $= 60$ minutes.
2. Team A: $60 + 45 = 105$ minutes; Team B: 100 minutes.
3. $105 - 100 = 5$ minutes more for A. The 45 minutes did not include A's hour.

Problem 5

1. 4 kg is $4{,}000$ g, with $4{,}250 - 4{,}000 = 250$ g remaining.
2. 5 kg is $5{,}000$ g, too much, so 4 is the greatest whole kilogram count.
3. 3 kg is $3{,}000$ g; $4{,}250 - 3{,}000 = 1{,}250$ g for label B.

Problem 6

1. 1 L $= 1{,}000$ mL, so 5 L is $5{,}000$ mL.
2. $5{,}000 - 2{,}200 = 2{,}800$ mL remain.
3. $2{,}200 + 2{,}800 = 5{,}000$ mL checks the plan.

Problem 7

1. 2 kg $= 2{,}000$ g; A is $1{,}000 + 300 = 1{,}300$ g.
2. That leaves $2{,}000 - 1{,}300 = 700$ g. Only 690 g is at most 700 g.
3. $700 - 690 = 10$ g below the limit.

Problem 8

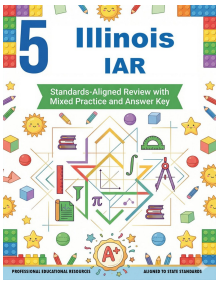
1. 2 yards $= 2 \times 3 = 6$ feet; that cuts into $6 \div 2 = 3$ strips.
2. 24 inches $= 24 \div 12 = 2$ feet; that gives one strip.
3. $3 + 1 = 4$ complete strips, with no pieces joined.

TESTINAR

Keep Building Grade 4 Math Skills

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

All Grade 4 books



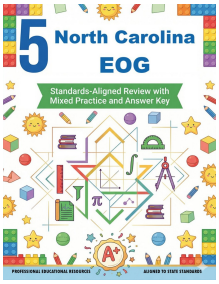
ILLINOIS IAR

5 Full-Length Math Practice Tests

Build Grade 4 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook



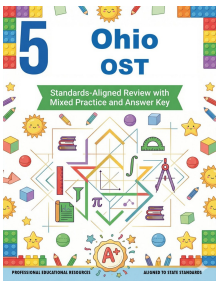
NORTH CAROLINA EOG

5 Full-Length Math Practice Tests

Build Grade 4 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 4 accuracy, confidence, and test stamina with 5 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 4 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/4