

Converting Units with Ratio Reasoning

Grade 6 math · Test Answer Key · Standards: 6.RP.A.3d

Each solution shows the expected steps and a scoring guide. Award partial credit when the conversion direction is right but a small arithmetic slip changes the final number.

Standards: 6.RP.A.3d · **Level:** Grade 6

Question 1 Customary Conversions (2 points)

- a. $7 \times 3 = \mathbf{21 \text{ feet.}}$
- b. $4.5 \times 16 = \mathbf{72 \text{ ounces.}}$

Scoring: 1 point for each part.

Question 2 Smaller to Larger Units (2 points)

- a. $96 \div 12 = \mathbf{8 \text{ feet.}}$
- b. $32 \text{ cups} \div 2 = 16 \text{ pints}; 16 \div 2 = 8 \text{ quarts}; 8 \div 4 = \mathbf{2 \text{ gallons.}}$

Scoring: 1 point for each part.

Question 3 Metric Conversions (2 points)

- a. $6.5 \times 1,000 = \mathbf{6,500 \text{ meters.}}$
- b. $480 \div 100 = \mathbf{4.8 \text{ meters.}}$

Scoring: 1 point for each part.

Question 4 Ratio Table (2 points)

Each gallon is 4 quarts: $5 \times 4 = 20$; $44 \div 4 = 11$; $9 \times 4 = 36$.

20 quarts, 11 gallons, 36 quarts.

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

Question 5 Which Is Farther? (2 points)

$1.1 \times 5,280 = 5,808 \text{ feet. } 5,808 - 5,700 = 108.$

1.1 miles is longer, by 108 feet.

Scoring: 1 point for converting; 1 point for the comparison and difference.

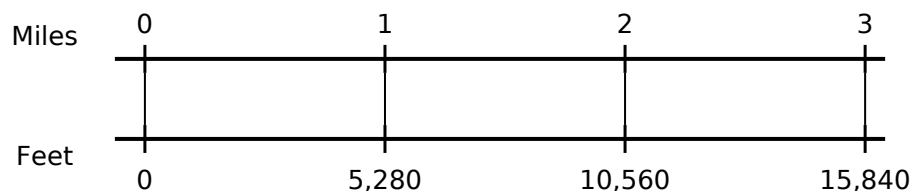
Question 6 Café Milk (3 points)

- a. $36 \div 2 = 18$ pints; $18 \div 2 = \mathbf{9}$ quarts.
- b. $9 \times 7 = 63$ quarts; $63 \div 4 = \mathbf{15.75}$ gallons.

Scoring: 1 point for (a); 1 point for 63 quarts, 1 point for the gallons.

Question 7 Double Number Line (3 points)

- a. Each mile adds 5,280 feet: **10,560 and 15,840.**
- b. $3.5 \times 5,280 = \mathbf{18,480}$ feet.



Each mile adds 5,280 feet.

Scoring: 1 point for (a); 2 points for (b), 1 point if the method is right.

Question 8 Jar Shipment (3 points)

- a. $24 \times 18 = \mathbf{432}$ ounces.
- b. $432 \div 16 = \mathbf{27}$ pounds.
- c. $30 - 27 = \mathbf{3}$ pounds under the limit.

Scoring: 1 point for each part.

Question 9 Milliliters to Liters (1 point)

$250 \div 1,000 = \mathbf{0.25}$ liter.

Scoring: 1 point for the correct value.