

Grade 5 · Dividing Unit Fractions and Whole Numbers · Test Answer Key

Common Core 5.NF.B.7 · mathovore.fr

This answer key shows full worked solutions and how the 20 points are awarded. Use the scoring notes to give partial credit when the method is right but the arithmetic has a slip.

Grade 5 Common Core: 5.NF.B.7

Question 1: Unit fractions divided by whole numbers (2 points)

- a. $\frac{1}{3 \times 5} = \frac{1}{15}$
b. $\frac{1}{8 \times 2} = \frac{1}{16}$

Scoring: 1 point for each correct answer.

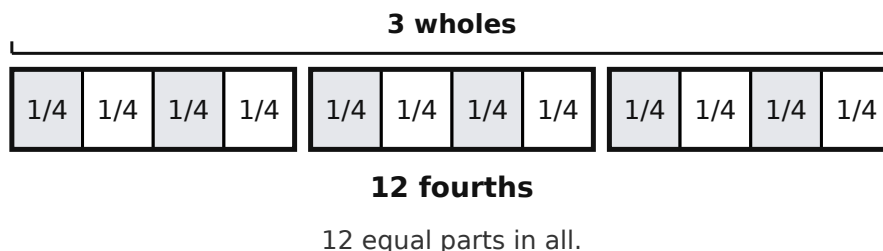
Question 2: Whole numbers divided by unit fractions (2 points)

- a. $4 \times 6 = 24$
b. $10 \times 3 = 30$

Scoring: 1 point for each correct answer.

Question 3: Reading a model (2 points)

- a. $3 \div \frac{1}{4}$
b. $3 \times 4 = 12$



Scoring: 1 point for $3 \div \frac{1}{4}$. 1 point for 12.

Question 4: Splitting a half (2 points)

- a. $\frac{1}{2} \div 4$
b. The whole has 8 equal pieces, so one piece is $\frac{1}{8}$. Check: $\frac{1}{2} \div 4 = \frac{1}{8}$.

Scoring: 1 point for the expression. 1 point for $\frac{1}{8}$.

Question 5: Checking a classmate (2 points)

Check by multiplying: $\frac{3}{4} \times 3 = \frac{9}{4}$, which is not $\frac{1}{4}$. Mei is not correct. The quotient is $\frac{1}{4 \times 3} = \frac{1}{12}$, and $\frac{1}{12} \times 3 = \frac{1}{4}$.

Scoring: 1 point for showing Mei is wrong with a valid reason. 1 point for $\frac{1}{12}$.

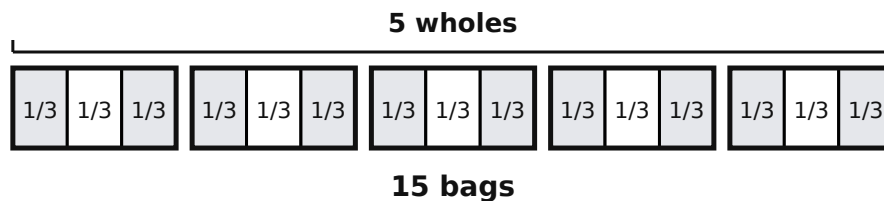
Question 6: Missing numbers (2 points)

- a. $6 \times 4 = 24$, so the missing number is 4.
- b. $7 \times 5 = 35$, so the missing number is 7.

Scoring: 1 point for each correct number.

Question 7: Bags of apples (3 points)

- a. $5 \div \frac{1}{3} = 5 \times 3 = 15$ bags
- b. Bags left: $15 - 6 = 9$. Weight: $9 \times \frac{1}{3} = 3$ pounds



5 pounds cut into thirds give 15 bags.

Scoring: Part a: 1 point for the equation $5 \div \frac{1}{3}$, 1 point for 15. Part b: 1 point for 3 pounds (follow-through allowed).

Question 8: Cheese sandwiches (3 points)

- a. $\frac{1}{2} \div 6 = \frac{1}{12}$ pound
- b. $4 \times \frac{1}{12} = \frac{4}{12} = \frac{1}{3}$ pound

Scoring: Part a: 1 point for the equation $\frac{1}{2} \div 6$, 1 point for $\frac{1}{12}$. Part b: 1 point for $\frac{1}{3}$ (follow-through allowed).

Question 9: Comparing quotients (2 points)

- a. $\frac{1}{5} \div 2 = \frac{1}{10}$ and $\frac{1}{5} \div 4 = \frac{1}{20}$. Splitting into 2 pieces gives bigger pieces than splitting into 4. The first is greater.
- b. $2 \div \frac{1}{5} = 10$ and $2 \div \frac{1}{4} = 8$. Fifths are smaller than fourths, so more fifths fit in 2. The first is greater.

Scoring: 1 point per part for the correct choice with a valid explanation or both quotients.

Total
20 points