

Grade 6 · Dividing Fractions · Test Answer Key

Common Core 6.NS.A.1 · mathovore.fr

This answer key gives worked solutions and a scoring guide for every question on the Grade 6 dividing fractions test. Points are given for the correct setup, the reciprocal step, accurate simplifying, and a final answer with units.

Grade 6 Common Core: 6.NS.A.1

Question 1: Dividing by a fraction (2 points)

(a) $\frac{3}{5} \times 10 = \frac{30}{5} = 6.$

(b) $4 \times \frac{3}{2} = \frac{12}{2} = 6.$

(a) 6. (b) 6.

Scoring: 1 point for each correct answer.

Question 2: Fraction quotients (2 points)

(a) $\frac{7}{8} \times \frac{4}{7} = \frac{28}{56} = \frac{1}{2}.$

(b) $\frac{3}{10} \times \frac{1}{3} = \frac{3}{30} = \frac{1}{10}.$

(a) $\frac{1}{2}$. (b) $\frac{1}{10}$.

Scoring: 1 point for each correct answer in simplest form.

Question 3: Mixed number quotients (2 points)

(a) $\frac{5}{2} \times \frac{6}{5} = \frac{30}{10} = 3.$

(b) $\frac{7}{4} \times \frac{3}{7} = \frac{21}{28} = \frac{3}{4}.$

(a) 3. (b) $\frac{3}{4}$.

Scoring: 1 point for each correct answer. Award the point only if mixed numbers were converted correctly.

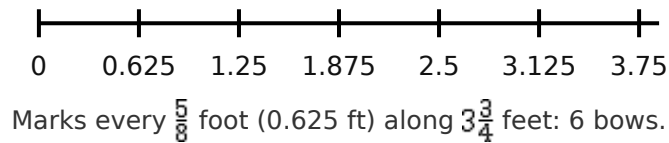
Question 4: Hair bows (3 points)

Divide the ribbon by the amount per bow: $3\frac{3}{4} \div \frac{5}{8} = \frac{15}{4} \times \frac{8}{5} = \frac{120}{20} = 6$.

Check: $6 \times \frac{5}{8} = \frac{30}{8} = 3\frac{3}{4}$.

6 bows.

Scoring: 1 point for writing the division, 1 point for a correct multiplication by the reciprocal, 1 point for 6 bows.



Question 5: Juice and lemonade (3 points)

(a) $\frac{2}{3} \div \frac{1}{6} = \frac{2}{3} \times 6 = \frac{12}{3} = 4$ bottles.

(b) $\frac{1}{2} \div 3 = \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$ gallon.

(a) 4 bottles. (b) $\frac{1}{6}$ gallon in each pitcher.

Scoring: (a) 1 point for the correct setup or reciprocal, 1 point for 4. (b) 1 point for $\frac{1}{6}$.

Question 6: Running pace (3 points)

(a) Speed = distance $\div$ time: $1\frac{1}{2} \div \frac{3}{4} = \frac{3}{2} \times \frac{4}{3} = \frac{12}{6} = 2$ miles per hour.

(b) $2 \times 2\frac{1}{2} = 2 \times \frac{5}{2} = 5$ miles.

(a) 2 mph. (b) 5 miles.

Scoring: (a) 1 point for converting and multiplying by the reciprocal, 1 point for 2. (b) 1 point for 5; accept follow-through from part (a).

Question 7: Checking a quotient (3 points)

(a) Liam multiplied by 2 instead of dividing, or flipped the whole number. Dividing by 2 means finding half: $\frac{1}{3} \div 2 = \frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$.

(b) Check: $\frac{1}{6} \times 2 = \frac{2}{6} = \frac{1}{3}$, which matches the start.

(a) The correct quotient is $\frac{1}{6}$. (b) $\frac{1}{6} \times 2 = \frac{1}{3}$.

Scoring: (a) 1 point for explaining the mistake, 1 point for $\frac{1}{6}$. (b) 1 point for a correct

multiplication check.

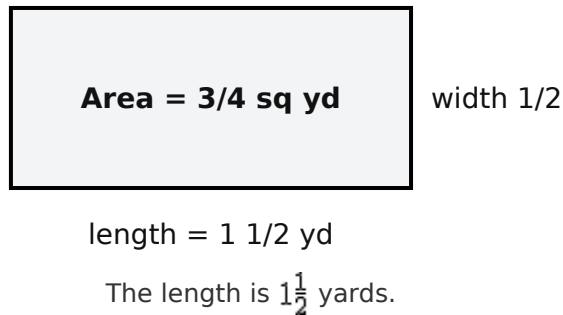
Question 8: Garden length (2 points)

$$\text{Length} = \text{area} \div \text{width}: \frac{3}{4} \div \frac{1}{2} = \frac{3}{4} \times 2 = \frac{6}{4} = \frac{3}{2} = 1\frac{1}{2}$$

$$\text{Check: } 1\frac{1}{2} \times \frac{1}{2} = \frac{3}{4}.$$

$1\frac{1}{2}$ yards.

Scoring: 1 point for dividing area by width, 1 point for $1\frac{1}{2}$ yards.



Total
20 points