

Grade 6 · Dividing Fractions · Worksheet

Answer Key

Common Core 6.NS.A.1 · mathovore.fr

This answer key shows a full worked solution for each of the 10 dividing fractions problems, with the reciprocal step and the simplified result. Compare your work and the bold final answers, and check each quotient by multiplying.

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

Problem 1: Halves and fourths

Multiply by the reciprocal: $\frac{1}{2} \times 4 = 2$.

Check: two fourths make one half.

2.



2 fourths fill one half.

Problem 2: Whole number by a fraction

$3 \div \frac{1}{2} = 3 \times 2 = 6$.

Check: each whole has 2 halves, so 3 wholes have 6 halves.

6.



6 halves make 3 wholes.

Problem 3: Fraction by a whole number

Dividing by 2 is multiplying by $\frac{1}{2}$: $\frac{4}{5} \times \frac{1}{2} = \frac{4}{10} = \frac{2}{5}$.

$\frac{2}{5}$.

Problem 4: Fourths and eighths

$$\frac{7}{8} \times 4 = \frac{28}{8} = \frac{7}{2}.$$

$$\frac{7}{2} = 3\frac{1}{2}.$$

$$3\frac{1}{2}.$$



$\frac{7}{8}$ holds $3\frac{1}{2}$ pieces of $\frac{1}{4}$.

Problem 5: Dividing two fractions

$$\frac{5}{6} \times \frac{3}{2} = \frac{15}{12} = \frac{5}{4}.$$

$$\frac{5}{4} = 1\frac{1}{4}.$$

$$1\frac{1}{4}.$$

Problem 6: Mixed number by a fraction

Change $1\frac{1}{2}$ to $\frac{3}{2}$.

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

2.

Problem 7: Two mixed numbers

Change both: $2\frac{1}{4} = \frac{9}{4}$ and $1\frac{1}{2} = \frac{3}{2}$.

$$\frac{9}{4} \times \frac{2}{3} = \frac{18}{12} = \frac{3}{2}.$$

$$\frac{3}{2} = 1\frac{1}{2}.$$

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

Problem 8: Ribbon bows

Divide the ribbon by the length of one bow: $4\frac{1}{2} \div \frac{3}{4} = \frac{9}{2} \times \frac{4}{3} = \frac{36}{6} = 6.$

6 bows.

Problem 9: Sharing pizza

Divide the pizza by 4: $\frac{2}{3} \div 4 = \frac{2}{3} \times \frac{1}{4} = \frac{2}{12} = \frac{1}{6}$.

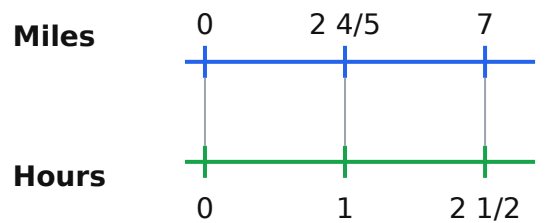
$\frac{1}{6}$ of the pizza.

Problem 10: Walking rate

(a) Speed = distance $\div$ time: $3\frac{1}{2} \div 1\frac{1}{4} = \frac{7}{2} \times \frac{4}{5} = \frac{28}{10} = \frac{14}{5} = 2\frac{4}{5}$ miles per hour.

(b) Time = distance $\div$ speed: $7 \div \frac{14}{5} = 7 \times \frac{5}{14} = \frac{35}{14} = \frac{5}{2} = 2\frac{1}{2}$ hours.

(a) $2\frac{4}{5}$ mph. (b) $2\frac{1}{2}$ hours.



$2\frac{4}{5}$ miles per hour; 7 miles take $2\frac{1}{2}$ hours.