

WA7MNAC5

Calculating with number

Core + Challenge

Dividing Fractions

I can divide whole numbers, fractions and mixed numbers by fractions.

Name: _____ Date: _____ Score: _____ / 56

Key idea

Think “how many fit?” $3 \div \frac{1}{4}$ asks how many quarters are in 3. There are 4 in each whole, so $3 \div \frac{1}{4} = 12$.

Rule – multiply by the reciprocal: keep the first fraction, change $\div$ to $\times$, flip the second fraction.

$$\frac{2}{3} \div \frac{4}{9} = \frac{2}{3} \times \frac{9}{4} = \frac{18}{12} = 1\frac{1}{2}$$

Mixed numbers: change to improper fractions first. $1\frac{1}{2} \div \frac{3}{4} = \frac{3}{2} \times \frac{4}{3} = 2$

A Fluency *practise the skill*

/ 16 marks

Give each answer in simplest form. Write improper fractions as mixed numbers.

1. $3 \div \frac{1}{4} =$ _____

9. $\frac{5}{6} \div \frac{2}{3} =$ _____

2. $5 \div \frac{1}{3} =$ _____

10. $\frac{4}{7} \div \frac{2}{3} =$ _____

3. $2 \div \frac{2}{5} =$ _____

11. $\frac{7}{8} \div \frac{1}{4} =$ _____

4. $\frac{1}{2} \div 4 =$ _____

12. $\frac{9}{10} \div \frac{3}{5} =$ _____

5. $\frac{3}{4} \div 3 =$ _____

13. $1\frac{1}{2} \div \frac{3}{4} =$ _____

6. $\frac{1}{2} \div \frac{1}{4} =$ _____

14. $5\frac{1}{4} \div 1\frac{1}{2} =$ _____

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

15. $3\frac{1}{3} \div \frac{5}{6} =$ _____

8. $\frac{3}{5} \div \frac{3}{10} =$ _____

16. $2\frac{2}{3} \div 1\frac{3}{5} =$ _____

Dividing Fractions · WA7MNAC5

B**Core** *apply the skill to problems*

/ 24 marks

- 1 How many $\frac{1}{4}$ -cup servings are there in $3\frac{1}{2}$ cups of yoghurt? [2 marks]

.....

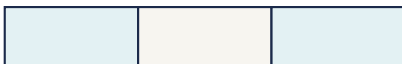
Answer: _____

- 2 A 6 m ribbon is cut into pieces that are each $\frac{3}{4}$ m long. How many pieces are there? [2 marks]

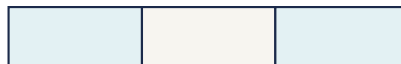
.....

Answer: _____

- 3 Each bar below is one whole, split into thirds. Use the diagram to find $2 \div \frac{1}{3}$, and explain what the answer means. [2 marks]



1 whole



1 whole

.....

Answer: _____

- 4 Four friends share $\frac{2}{3}$ of a pizza equally. What fraction of the whole pizza does each friend get? [2 marks]

.....

.....

Answer: _____

- 5 A car travels 250 km on $\frac{5}{8}$ of a tank of fuel. How far could it travel on a full tank at the same rate? [3 marks]

.....

.....

Answer: _____

Dividing Fractions · WA7MNAC5

- 6 A rectangle has an area of $7\frac{1}{2}$ m² and a width of $2\frac{1}{2}$ m. [3 marks]

- (a) Find its length.
(b) Find its perimeter.

.....

.....

Answer: _____

- 7 A butcher makes $4\frac{1}{2}$ kg of mince into patties that each weigh $\frac{3}{8}$ kg. How many patties can be made? [2 marks]

.....

.....

Answer: _____

- 8 A $2\frac{1}{4}$ L bottle of water is poured into glasses that each hold $\frac{3}{10}$ L. [3 marks]

- (a) How many glasses can be filled completely?
(b) How much water is left over?

.....

.....

Answer: _____

- 9 A 12 km walking trail has a water station every $1\frac{1}{2}$ km, with the last one at the finish. How many water stations are there? [2 marks]

.....

.....

Answer: _____

- 10 Jo reads $\frac{2}{3}$ of a book in 5 days, reading the same amount each day. [3 marks]

- (a) What fraction of the book does she read each day?
(b) How many days will the whole book take?

.....

.....

Answer: _____

Dividing Fractions · WA7MNAC5

C**Reasoning** *explain, justify and check*

/ 9 marks

- 1 Explain why dividing by $\frac{1}{2}$ gives the same answer as multiplying by 2. Use $4 \div \frac{1}{2}$ as your example. [2 marks]

- 2 Without calculating, is $\frac{5}{6} \div \frac{2}{3}$ greater than or less than $\frac{5}{6}$? Explain. [2 marks]

- 3 Noah wrote $\frac{3}{4} \div \frac{1}{2} = \frac{4}{3} \times \frac{1}{2} = \frac{2}{3}$. Explain his mistake and find the correct answer. [2 marks]

- 4 Without calculating, arrange from smallest to largest, and explain: $6 \div 2$ $6 \div \frac{1}{2}$ $6 \div \frac{3}{2}$ $6 \div \frac{2}{3}$ [3 marks]

D**Challenge** *multi-step and problem-solving*

/ 7 marks

- 1 Write a word problem that can be solved using $3 \div \frac{3}{4}$. Then solve it. [2 marks]

Answer: _____

Dividing Fractions · WA7MNAC5

- 2 How many $\frac{2}{3}$ -cup scoops of rice are in 5 cups? Your answer is not a whole number – explain what the fraction part means. [3 marks]

.....

.....

.....

Answer: _____

- 3 Find the missing number. [2 marks]
- (a) $\frac{3}{4} \div \square = 1\frac{1}{2}$ (b) $\square \div \frac{2}{5} = 2\frac{1}{2}$

.....

.....

How did I go?

Fluency ____ / 16 Core ____ / 24 Reasoning ____ / 9 Challenge ____ / 7 **Total ____ / 56**

Stuck on a section? Our Year 7 tutors can show you exactly what to practise next. **Book a free trial class at edulift.com.au**