

11+ Maths Practice Paper

Year 6 · Advanced

Lesson 3.4: Multiplying and dividing fractions

Read this with your child:

1. This paper has **27 questions** in two parts. Work through them in order. The questions get harder as you go.
2. **Part 1** is multiple choice. Choose **one** answer, A, B, C, D or E, and mark it on the separate answer sheet by drawing a firm line through the box next to its letter. If you change your mind, rub the line out completely and mark your new answer.
3. **Part 2** asks you to write your answer. Write it in the boxes on the answer sheet, **one digit in each box**, starting from the left.
4. If a question is hard, leave it and come back to it at the end.
5. You may use rough paper for working out. You may **not** use a calculator.
6. Suggested time: **35 minutes**.

The answer sheet is after the questions. The answers, with a short explanation of each, are at the back for a parent to mark with.

These are original practice questions written by Elite Learners in the style of 11+ entrance tests. They are not produced by, or connected with, GL Assessment or Cambridge University Press & Assessment (CEM).

Example

Work out this calculation. Give your answer in its simplest form.

$$\frac{4}{9} \times \frac{3}{8} = \boxed{?}$$

A $\frac{7}{17}$

B $\frac{1}{8}$

C $\frac{1}{6}$

D $\frac{1}{3}$

E $\frac{7}{72}$

Answer: C Tops: $4 \times 3 = 12$. Bottoms: $9 \times 8 = 72$. $\frac{12}{72} = \frac{1}{6}$ (divide by 12).

The answer, C, has already been marked on your answer sheet.

Now turn over and start Part 1.

Part 1: Multiple choice

1

Work out this calculation.

$$2\frac{2}{3} \times 6 = \boxed{?}$$

A $12\frac{2}{3}$

B 14

C $12\frac{1}{3}$

D 13

E 16

2

Work out this calculation. Give your answer in its simplest form.

$$\frac{5}{6} \times \frac{9}{10} = \boxed{?}$$

A $\frac{7}{8}$

B $\frac{3}{4}$

C $2\frac{13}{16}$

D $\frac{5}{9}$

E $\frac{1}{2}$

3

Work out this calculation. Give your answer in its simplest form.

$$\frac{8}{9} \div 4 = \boxed{?}$$

A $3\frac{5}{9}$

B $\frac{8}{13}$

C $\frac{1}{18}$

D $\frac{2}{9}$

E $\frac{4}{9}$

4

A ribbon is $\frac{3}{4}$ m long. It is cut into 6 equal pieces.

How long is each piece?

A $\frac{1}{8}$ m

B $4\frac{1}{2}$ m

C $\frac{3}{10}$ m

D $\frac{1}{2}$ m

E $\frac{1}{6}$ m

5

What is $\frac{2}{3}$ of $\frac{9}{10}$? Give your answer in its simplest form.

A $\frac{11}{13}$

B $\frac{2}{5}$

C $\frac{3}{5}$

D $1\frac{7}{20}$

E $\frac{3}{10}$

6

Work out this calculation. Give your answer in its simplest form.

$$\frac{3}{4} \times \frac{2}{3} \times \frac{4}{5} = \boxed{?}$$

A $\frac{3}{4}$

B $\frac{1}{2}$

C $\frac{3}{5}$

D $\frac{2}{5}$

E 2

7

Amir says that $\frac{2}{5} \times 3 = \frac{6}{15}$.

What mistake has he made?

A He added instead of multiplying.

B He forgot to simplify.

C He divided by 3.

D He made no mistake.

E He multiplied the bottom by 3 as well.

8

Work out this calculation. Give your answer in its simplest form.

$$\frac{5}{8} \times 12 = \boxed{?}$$

A $7\frac{1}{2}$

B $\frac{5}{96}$

C $7\frac{5}{8}$

D $6\frac{1}{2}$

E $7\frac{1}{4}$

9

$\frac{3}{5}$ of the pupils in a class are girls. $\frac{2}{3}$ of the girls have long hair.

What fraction of the class are girls with long hair?

A $\frac{5}{8}$

B $\frac{1}{3}$

C $\frac{2}{5}$

D $\frac{3}{5}$

E $\frac{4}{15}$

10

What is the missing number?

$$\frac{6}{7} \div 3 = \frac{\boxed{?}}{7}$$

A 18

B 2

C 6

D 3

E 21

11

Work out this calculation. Give your answer in its simplest form.

$$9 \times \frac{7}{12} = \boxed{?}$$

A $5\frac{7}{12}$

B $4\frac{3}{4}$

C $5\frac{1}{2}$

D $\frac{7}{12}$

E $5\frac{1}{4}$

12

Work out this calculation. Give your answer in its simplest form.

$$\frac{7}{10} \times \frac{5}{14} = \boxed{?}$$

A $\frac{1}{2}$

B $\frac{7}{20}$

C $\frac{5}{28}$

D $\frac{1}{4}$

E $\frac{1}{7}$

13

A jug holds $\frac{4}{5}$ of a litre of milk. It is poured equally into 4 glasses.

How much milk is in each glass?

A $3\frac{1}{5}$ litres

B $\frac{1}{5}$ of a litre

C $\frac{4}{9}$ of a litre

D $\frac{4}{5}$ of a litre

E $\frac{1}{20}$ of a litre

14

What fraction must be multiplied by $\frac{3}{4}$ to give $\frac{9}{20}$?

A $\frac{3}{5}$

B $\frac{3}{8}$

C $\frac{1}{2}$

D $\frac{27}{80}$

E $\frac{1}{4}$

15

Work out this calculation.

$$3\frac{3}{4} \times 4 = \boxed{?}$$

A $12\frac{3}{4}$

B 13

C 15

D 14

E 16

16

What is the missing number?

$$\frac{2}{9} \times \frac{3}{4} = \frac{1}{\boxed{?}}$$

A 36

B 6

C 12

D 13

E 4

17

A farmer still has $\frac{5}{8}$ of a field to plough. Today he ploughs half of what is left.

What fraction of the whole field does he plough today?

A $\frac{5}{12}$

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

C $\frac{5}{8}$

D $\frac{1}{3}$

E $\frac{2}{5}$

18

Work out this calculation. Give your answer in its simplest form.

$$\frac{12}{13} \div 6 = \boxed{?}$$

A $5\frac{7}{13}$

B $\frac{12}{19}$

C $\frac{1}{39}$

D $\frac{1}{13}$

E $\frac{2}{13}$

19

Work out this calculation. Give your answer in its simplest form.

$$\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} = \boxed{?}$$

A $\frac{5}{7}$

B $\frac{1}{2}$

C $\frac{4}{5}$

D $\frac{1}{5}$

E $\frac{1}{120}$

20

Mia has $\frac{3}{4}$ of a bar of chocolate. She gives $\frac{1}{3}$ of it to her brother.

What fraction of the whole bar does she give away?

A $\frac{5}{12}$

B $\frac{4}{7}$

C $\frac{1}{4}$

D $\frac{1}{2}$

E $\frac{1}{12}$

Part 2: Write your answer

21

What is the missing number?

$$\frac{5}{6} \times \frac{3}{5} = \frac{1}{\boxed{?}}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

22

What is the missing number?

$$\frac{9}{11} \div 3 = \frac{\boxed{?}}{11}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

23

What is the missing number?

$$2\frac{3}{8} \times 4 = 9\frac{\boxed{?}}{2}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

24

What is the missing number?

$$\frac{4}{7} \times \frac{\boxed{?}}{8} = \frac{3}{14}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

25

What is the missing number?

$$12 \times \frac{5}{9} = 6 \frac{\boxed{?}}{3}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

26

What is the missing number?

$$\frac{3}{5} \div 4 = \frac{3}{\boxed{?}}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

27

Leo has 3 bags of flour. Each bag holds $\frac{3}{4}$ kg. He uses half of all his flour.

What is the missing number?

$$3 \times \frac{3}{4} \times \frac{1}{2} = 1 \frac{\boxed{?}}{8}$$

Write your answer in the boxes on the answer sheet, one digit in each box.

Answer sheet

11+ Maths Practice Paper · Year 6 · Lesson 3.4: Multiplying and dividing fractions

Name

Draw a firm line through the box next to your answer, like the example.

Part 1: Multiple choice

Ex	A ☐	B ☐	C ☒	D ☐	E ☐
1	A ☐	B ☐	C ☐	D ☐	E ☐
2	A ☐	B ☐	C ☐	D ☐	E ☐
3	A ☐	B ☐	C ☐	D ☐	E ☐
4	A ☐	B ☐	C ☐	D ☐	E ☐
5	A ☐	B ☐	C ☐	D ☐	E ☐
6	A ☐	B ☐	C ☐	D ☐	E ☐
7	A ☐	B ☐	C ☐	D ☐	E ☐
8	A ☐	B ☐	C ☐	D ☐	E ☐
9	A ☐	B ☐	C ☐	D ☐	E ☐
10	A ☐	B ☐	C ☐	D ☐	E ☐
11	A ☐	B ☐	C ☐	D ☐	E ☐
12	A ☐	B ☐	C ☐	D ☐	E ☐
13	A ☐	B ☐	C ☐	D ☐	E ☐
14	A ☐	B ☐	C ☐	D ☐	E ☐
15	A ☐	B ☐	C ☐	D ☐	E ☐
16	A ☐	B ☐	C ☐	D ☐	E ☐
17	A ☐	B ☐	C ☐	D ☐	E ☐
18	A ☐	B ☐	C ☐	D ☐	E ☐
19	A ☐	B ☐	C ☐	D ☐	E ☐
20	A ☐	B ☐	C ☐	D ☐	E ☐

Part 2: Write your answer, one digit in each box

21	
22	
23	
24	
25	
26	
27	

Answers

For a parent to mark with. One mark for each question: the paper is out of 27. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	E 16	$2\frac{2}{3} = \frac{8}{3}$. $8 \times 6 = 48$, so $\frac{48}{3} = 16$. (12 $\frac{2}{3}$ forgets to multiply the $\frac{2}{3}$.)
2	B $\frac{3}{4}$	Tops: $5 \times 9 = 45$. Bottoms: $6 \times 10 = 60$. $\frac{45}{60} = \frac{3}{4}$ (divide by 15).
3	D $\frac{2}{9}$	$8 \div 4 = 2$, so divide the top: $\frac{2}{9}$. (Or $\frac{8}{36} = \frac{2}{9}$.)
4	A $\frac{1}{8}$ m	$\frac{3}{4} \div 6$: the top stays 3 and the bottom is $4 \times 6 = 24$. $\frac{3}{24} = \frac{1}{8}$ m.
5	C $\frac{3}{5}$	Tops: $2 \times 9 = 18$. Bottoms: $3 \times 10 = 30$. $\frac{18}{30} = \frac{3}{5}$.
6	D $\frac{2}{5}$	Tops: $3 \times 2 \times 4 = 24$. Bottoms: $4 \times 3 \times 5 = 60$. $\frac{24}{60} = \frac{2}{5}$ (divide by 12).
7	E He multiplied the bottom by 3 as well.	Only the top is multiplied: $\frac{2}{5} \times 3 = \frac{6}{5} = 1\frac{1}{5}$. Amir's $\frac{6}{15}$ is the same as $\frac{2}{5}$, so nothing was multiplied.
8	A $7\frac{1}{2}$	$5 \times 12 = 60$, so $\frac{60}{8} = 7\frac{4}{8} = 7\frac{1}{2}$.
9	C $\frac{2}{5}$	$\frac{2}{3}$ of $\frac{3}{5}$ is $\frac{2}{3} \times \frac{3}{5} = \frac{6}{15} = \frac{2}{5}$.
10	B 2	$6 \div 3 = 2$, so the top is divided: $\frac{2}{7}$. (Or $\frac{6}{21} = \frac{2}{7}$.)
11	E $5\frac{1}{4}$	$9 \times 7 = 63$, so $\frac{63}{12} = 5\frac{3}{12} = 5\frac{1}{4}$.
12	D $\frac{1}{4}$	Tops: $7 \times 5 = 35$. Bottoms: $10 \times 14 = 140$. $\frac{35}{140} = \frac{1}{4}$ (divide by 35).
13	B $\frac{1}{5}$ of a litre	$\frac{4}{5} \div 4$: $4 \div 4 = 1$, so $\frac{1}{5}$ of a litre in each glass.
14	A $\frac{3}{5}$	Tops: $? \times 3 = 9$, so 3. Bottoms: $? \times 4 = 20$, so 5. The fraction is $\frac{3}{5}$.
15	C 15	$3 \times 4 = 12$ and $\frac{3}{4} \times 4 = 3$, so $12 + 3 = 15$. (Or $\frac{15}{4} \times 4 = 15$.)
16	B 6	Tops: $2 \times 3 = 6$. Bottoms: $9 \times 4 = 36$. $\frac{6}{36} = \frac{1}{6}$.
17	A $\frac{5}{12}$	Half of $\frac{5}{6}$ is $\frac{1}{2} \times \frac{5}{6} = \frac{5}{12}$.
18	E $\frac{2}{13}$	$12 \div 6 = 2$, so divide the top: $\frac{2}{13}$. (Or $\frac{12}{78} = \frac{2}{13}$.)
19	D $\frac{1}{5}$	Tops: $1 \times 2 \times 3 \times 4 = 24$. Bottoms: $2 \times 3 \times 4 \times 5 = 120$. $\frac{24}{120} = \frac{1}{5}$.
20	C $\frac{1}{4}$	$\frac{1}{3}$ of $\frac{3}{4}$ is $\frac{1}{3} \times \frac{3}{4} = \frac{3}{12} = \frac{1}{4}$ of the bar.
21	2	Tops: $5 \times 3 = 15$. Bottoms: $6 \times 5 = 30$. $\frac{15}{30} = \frac{1}{2}$.
22	3	$9 \div 3 = 3$, so $\frac{3}{11}$.
23	1	$2\frac{3}{8} = \frac{19}{8}$. $19 \times 4 = 76$, so $\frac{76}{8} = 9\frac{4}{8} = 9\frac{1}{2}$.
24	3	$\frac{3}{14} = \frac{12}{56}$. Tops: $4 \times ? = 12$, so 3. Bottoms: $7 \times 8 = 56$.
25	2	$12 \times 5 = 60$, so $\frac{60}{9} = 6\frac{6}{9} = 6\frac{2}{3}$.
26	20	The top stays 3. Multiply the bottom: $5 \times 4 = 20$.
27	1	$3 \times \frac{3}{4} = \frac{9}{4}$ kg. Half of that is $\frac{9}{8} = 1\frac{1}{8}$ kg.

Score: out of 27