

11+ Maths Practice Paper

Year 6 · Advanced

Lesson 3.3: Adding and subtracting 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 sum.

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

A $3\frac{5}{7}$

B $3\frac{5}{12}$

C $4\frac{5}{12}$

D $4\frac{1}{12}$

E $5\frac{5}{12}$

Answer: C Wholes: $2 + 1 = 3$. Fractions: $\frac{9}{12} + \frac{8}{12} = \frac{17}{12} = 1\frac{5}{12}$. Carry the whole: $4\frac{5}{12}$.

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 subtraction.

$$5\frac{1}{6} - 2\frac{3}{4} = \boxed{?}$$

A $3\frac{7}{12}$

B $2\frac{7}{12}$

C $3\frac{5}{12}$

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

E $2\frac{5}{12}$

2

Work out this sum.

$$\frac{3}{8} + \frac{5}{6} = \boxed{?}$$

A $\frac{8}{14}$

B $1\frac{5}{24}$

C $1\frac{5}{12}$

D $\frac{29}{48}$

E $1\frac{7}{24}$

3

What fraction must be added to $\frac{2}{5}$ to make $\frac{9}{10}$?

A $\frac{7}{10}$

B $\frac{7}{15}$

C $\frac{2}{5}$

D $\frac{1}{2}$

E $\frac{3}{10}$

4

Work out this sum.

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

A $1\frac{1}{12}$

B $\frac{3}{9}$

C $\frac{1}{12}$

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

E $\frac{13}{24}$

5

A recipe needs $1\frac{1}{2}$ cups of flour for a cake and $\frac{3}{4}$ of a cup for some biscuits.

How much flour is needed altogether?

A $1\frac{4}{6}$ cups

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

C $2\frac{1}{4}$ cups

D $1\frac{1}{4}$ cups

E $2\frac{3}{4}$ cups

6

Work out this subtraction.

$$8 - 3\frac{5}{8} = \boxed{?}$$

A $5\frac{3}{8}$

B $5\frac{5}{8}$

C $4\frac{5}{8}$

D $4\frac{3}{8}$

E $11\frac{5}{8}$

7

Tom has a rope $3\frac{1}{3}$ m long. He cuts off $1\frac{3}{4}$ m.

How much rope is left?

A $2\frac{5}{12}$ m

B $1\frac{1}{12}$ m

C $1\frac{5}{12}$ m

D $2\frac{7}{12}$ m

E $1\frac{7}{12}$ m

8

Work out this sum.

$$2\frac{5}{6} + 3\frac{3}{4} = \boxed{?}$$

A $6\frac{7}{12}$

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

C $5\frac{8}{10}$

D $6\frac{5}{12}$

E $7\frac{7}{12}$

9

Two fractions add up to $\frac{11}{12}$. One of them is $\frac{1}{4}$.

What is the other fraction?

A $\frac{5}{6}$

B $\frac{1}{2}$

C $\frac{2}{3}$

D $\frac{7}{12}$

E $\frac{3}{4}$

10

Work out this subtraction.

$$\frac{7}{9} - \frac{1}{6} = \boxed{?}$$

A $\frac{1}{3}$

B $\frac{11}{18}$

C $\frac{13}{18}$

D $\frac{5}{9}$

E $\frac{2}{3}$

11

A tank is full of water. On Monday $\frac{1}{3}$ of the water is used, and on Tuesday $\frac{2}{5}$ is used.

What fraction of the water is left?

A $\frac{11}{15}$

B $\frac{3}{8}$

C $\frac{5}{8}$

D $\frac{1}{15}$

E $\frac{4}{15}$

12

Work out this calculation.

$$4\frac{2}{3} + 3\frac{5}{6} - 2\frac{1}{2} = \boxed{?}$$

A 5

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

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

D 6

E 7

13

Amir works out $4\frac{1}{5} - 1\frac{3}{5}$ and gets $3\frac{2}{5}$.

What mistake has he made?

A He added instead of taking away.

B He took $\frac{1}{5}$ from $\frac{3}{5}$ instead of borrowing a whole.

C He changed the bottom number.

D He forgot to take away the whole numbers.

E He made no mistake.

14

Work out this sum.

$$\frac{5}{12} + \frac{3}{8} = \boxed{?}$$

A $\frac{19}{24}$

B $\frac{8}{20}$

C $\frac{8}{24}$

D $\frac{2}{5}$

E $\frac{19}{48}$

15

What is the missing number?

$$6\frac{1}{4} - 2\frac{5}{6} = 3\frac{\boxed{?}}{12}$$

A 7

B 3

C 5

D 2

E 8

16

Two planks are $2\frac{3}{8}$ m and $1\frac{3}{4}$ m long.

How much longer is the first plank?

A $1\frac{3}{8}$ mB $\frac{5}{8}$ mC $1\frac{5}{8}$ mD $\frac{3}{8}$ mE $4\frac{1}{8}$ m

17

What must be added to $2\frac{3}{10}$ to make 5?A $2\frac{7}{10}$ B $3\frac{7}{10}$ C $2\frac{3}{10}$ D $3\frac{3}{10}$ E $7\frac{3}{10}$

18

Work out this calculation.

$$\frac{2}{3} - \frac{1}{4} + \frac{1}{6} = \boxed{?}$$

A $\frac{2}{5}$ B $\frac{1}{12}$ C $\frac{1}{4}$ D $\frac{5}{12}$ E $\frac{7}{12}$

19

Ella spends $\frac{1}{4}$ of her pocket money on a book and $\frac{3}{8}$ on a game.

What fraction of her pocket money does she have left?

A $\frac{5}{8}$ B $\frac{4}{12}$ C $\frac{1}{2}$ D $\frac{3}{8}$ E $\frac{1}{8}$

20

What must be taken away from $7\frac{1}{6}$ to leave $3\frac{2}{3}$?A $4\frac{1}{2}$ B $3\frac{5}{6}$ C $3\frac{1}{2}$ D $4\frac{1}{6}$ E $10\frac{5}{6}$

Part 2: Write your answer

21

What is the missing number?

$$\frac{3}{5} + \frac{1}{4} = \frac{\boxed{?}}{20}$$

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

22

What is the missing number?

$$\frac{5}{6} - \frac{3}{8} = \frac{\boxed{?}}{24}$$

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

23

What is the missing number?

$$3\frac{5}{8} + 2\frac{3}{4} = 6\frac{\boxed{?}}{8}$$

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

24

What is the missing number?

$$7\frac{1}{3} - 4\frac{5}{6} = 2\frac{\boxed{?}}{2}$$

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

25

What is the missing number?

$$\frac{7}{12} + \frac{\boxed{?}}{12} = 1$$

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

26

Max drinks $1\frac{2}{3}$ litres of water on Saturday and $2\frac{3}{4}$ litres on Sunday.

What is the missing number?

$$1\frac{2}{3} + 2\frac{3}{4} = 4\frac{\boxed{?}}{12}$$

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

27

What is the missing whole number?

$$10 - 3\frac{7}{9} = \boxed{?}\frac{2}{9}$$

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

Answer sheet

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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 $2\frac{5}{12}$	In twelfths: $5\frac{2}{12} - 2\frac{9}{12}$. $\frac{2}{12}$ is too small, so borrow a whole: $4\frac{14}{12} - 2\frac{9}{12} = 2\frac{5}{12}$.
2	B $1\frac{5}{24}$	The LCM of 8 and 6 is 24. $\frac{9}{24} + \frac{20}{24} = \frac{29}{24} = 1\frac{5}{24}$.
3	D $\frac{1}{2}$	Work backwards: $\frac{9}{10} - \frac{2}{5} = \frac{9}{10} - \frac{4}{10} = \frac{5}{10} = \frac{1}{2}$.
4	A $1\frac{1}{12}$	The LCM of 2, 3 and 4 is 12. $\frac{6}{12} + \frac{4}{12} + \frac{3}{12} = \frac{13}{12} = 1\frac{1}{12}$.
5	C $2\frac{1}{4}$ cups	$\frac{1}{2} = \frac{2}{4}$. Fractions: $\frac{2}{4} + \frac{3}{4} = \frac{5}{4} = 1\frac{1}{4}$. Wholes: $1 + 1 = 2$. So $2\frac{1}{4}$ cups.
6	D $4\frac{3}{8}$	Borrow a whole: $8 = 7\frac{8}{8}$. Then $7 - 3 = 4$ and $\frac{8}{8} - \frac{5}{8} = \frac{3}{8}$. So $4\frac{3}{8}$.
7	E $1\frac{7}{12}$ m	In twelfths: $3\frac{4}{12} - 1\frac{9}{12}$. Borrow a whole: $2\frac{16}{12} - 1\frac{9}{12} = 1\frac{7}{12}$ m.
8	A $6\frac{7}{12}$	Wholes: $2 + 3 = 5$. Fractions: $\frac{10}{12} + \frac{9}{12} = \frac{19}{12} = 1\frac{7}{12}$. Carry the whole: $6\frac{7}{12}$.
9	C $\frac{2}{3}$	$\frac{11}{12} - \frac{1}{4} = \frac{11}{12} - \frac{3}{12} = \frac{8}{12} = \frac{2}{3}$.
10	B $\frac{11}{18}$	The LCM of 9 and 6 is 18. $\frac{14}{18} - \frac{3}{18} = \frac{11}{18}$.
11	E $\frac{4}{15}$	Used: $\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15}$. The full tank is $\frac{15}{15}$, so $\frac{4}{15}$ is left.
12	D 6	In sixths: $4\frac{4}{6} + 3\frac{5}{6} = 7\frac{9}{6} = 8\frac{3}{6}$. Then $8\frac{3}{6} - 2\frac{3}{6} = 6$.
13	B He took $\frac{1}{5}$ from $\frac{3}{5}$ instead of borrowing a whole.	$\frac{1}{5}$ is less than $\frac{3}{5}$, so a whole must be borrowed: $3\frac{6}{5} - 1\frac{3}{5} = 2\frac{3}{5}$. Amir did $\frac{3}{5} - \frac{1}{5}$ instead.
14	A $\frac{19}{24}$	The LCM of 12 and 8 is 24. $\frac{10}{24} + \frac{9}{24} = \frac{19}{24}$.
15	C 5	In twelfths: $6\frac{3}{12} - 2\frac{10}{12}$. Borrow a whole: $5\frac{15}{12} - 2\frac{10}{12} = 3\frac{5}{12}$.
16	B $\frac{5}{8}$ m	$\frac{3}{4} = \frac{6}{8}$. Borrow a whole: $1\frac{11}{8} - 1\frac{6}{8} = \frac{5}{8}$ m.
17	A $2\frac{7}{10}$	$5 = 4\frac{10}{10}$. Then $4\frac{10}{10} - 2\frac{3}{10} = 2\frac{7}{10}$.
18	E $\frac{7}{12}$	In twelfths: $\frac{9}{12} - \frac{3}{12} + \frac{2}{12} = \frac{7}{12}$.
19	D $\frac{3}{8}$	Spent: $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$. All of it is $\frac{8}{8}$, so $\frac{3}{8}$ is left.
20	C $3\frac{1}{2}$	$7\frac{1}{6} - 3\frac{2}{3} = 7\frac{1}{6} - 3\frac{4}{6}$. Borrow a whole: $6\frac{7}{6} - 3\frac{4}{6} = 3\frac{3}{6} = 3\frac{1}{2}$.
21	17	$\frac{12}{20} + \frac{5}{20} = \frac{17}{20}$.
22	11	$\frac{20}{24} - \frac{9}{24} = \frac{11}{24}$.
23	3	$\frac{3}{4} = \frac{6}{8}$. Wholes: 5. Fractions: $\frac{11}{8} = 1\frac{3}{8}$. Carry the whole: $6\frac{3}{8}$.
24	1	In sixths: $7\frac{2}{6} - 4\frac{5}{6}$. Borrow a whole: $6\frac{8}{6} - 4\frac{5}{6} = 2\frac{3}{6} = 2\frac{1}{2}$.
25	5	1 whole is $\frac{12}{12}$, and $12 - 7 = 5$.
26	5	Wholes: 3. Fractions: $\frac{8}{12} + \frac{9}{12} = \frac{17}{12} = 1\frac{5}{12}$. Carry the whole: $4\frac{5}{12}$ litres.
27	6	Borrow a whole: $10 = 9\frac{9}{9}$. Then $9 - 3 = 6$ and $\frac{9}{9} - \frac{7}{9} = \frac{2}{9}$. So $6\frac{2}{9}$.

Score: out of 27