

11+ Maths Practice Paper

Year 5 · Intermediate

Lesson 3.2: Mixed numbers and improper fractions

Read this with your child:

1. This paper has **24 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: **30 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

Write this fraction as a mixed number.

$$\frac{17}{5}$$

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

B $2\frac{2}{5}$

C $3\frac{2}{5}$

D 3 r 2

E $2\frac{3}{5}$

Answer: C $17 \div 5 = 3 \text{ r } 2$. The whole number is 3 and the remainder, 2, goes over 5: $3\frac{2}{5}$.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

Write this fraction as a mixed number.

$$\frac{23}{6}$$

A $3\frac{3}{6}$

B $2\frac{5}{6}$

C $3\frac{5}{6}$

D $4\frac{1}{6}$

E $3\frac{5}{23}$

2

Write this mixed number as an improper fraction.

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

A $\frac{42}{3}$

B $\frac{6}{3}$

C $\frac{12}{3}$

D $\frac{11}{3}$

E $\frac{14}{3}$

3

What is the missing whole number?

$$\frac{29}{8} = \boxed{?} \frac{5}{8}$$

A 3

B 2

C 4

D 5

E 29

4

What is the missing number?

$$5\frac{3}{7} = \frac{\boxed{?}}{7}$$

A 53

B 35

C 15

D 38

E 22

5

Write this fraction as a mixed number in its simplest form.

$$\frac{26}{4}$$

A $6\frac{2}{4}$

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

C $6\frac{1}{4}$

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

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

6

What whole number is this fraction equal to?

$$\frac{45}{9} = \boxed{?}$$

A 4

B 9

C 36

D 54

E 5

7

Which fraction is equal to 4?

A $\frac{4}{4}$

B $\frac{12}{4}$

C $\frac{20}{5}$

D $\frac{5}{4}$

E $\frac{8}{4}$

8

Which two whole numbers is this fraction between?

$$\frac{19}{4}$$

A 4 and 5

B 3 and 4

C 5 and 6

D 19 and 20

E 1 and 2

9

A baker cuts each cake into 8 equal slices. He sells 21 slices.

How many cakes is this, as a mixed number?

A $2\frac{1}{8}$

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

C $2\frac{5}{21}$

D $2\frac{5}{8}$

E $5\frac{2}{8}$

10

Which improper fraction is equal to this mixed number?

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

A $\frac{61}{2}$

B $\frac{13}{2}$

C $\frac{7}{2}$

D $\frac{12}{2}$

E $\frac{14}{2}$

11

Which pair is not equal?

A $3\frac{1}{5}$ and $\frac{31}{5}$

B $1\frac{2}{3}$ and $\frac{5}{3}$

C $2\frac{1}{4}$ and $\frac{9}{4}$

D $4\frac{1}{2}$ and $\frac{9}{2}$

E $2\frac{3}{4}$ and $\frac{11}{4}$

12

How many quarter hours are there in $2\frac{3}{4}$ hours?

A 5

B 8

C 23

D 9

E 11

13

What is the missing number?

$$3\frac{\boxed{?}}{9} = \frac{32}{9}$$

A 2

B 3

C 5

D 6

E 9

14

Which improper fraction is between 3 and 4?

A $\frac{11}{4}$

B $\frac{16}{4}$

C $\frac{17}{4}$

D $\frac{13}{4}$

E $\frac{9}{4}$

15

Write this fraction as a mixed number in its simplest form.

$$\frac{50}{8}$$

A $6\frac{2}{8}$

B $6\frac{1}{4}$

C $6\frac{1}{8}$

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

E $8\frac{1}{4}$

16

A ribbon is $2\frac{7}{5}$ metres long.

What is this length as a mixed number?

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

B $4\frac{2}{5}$

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

D $5\frac{3}{5}$

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

17

Which mixed number is equal to this fraction?

$$\frac{14}{4}$$

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

B $3\frac{1}{4}$

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

D $2\frac{3}{4}$

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

18

What is the missing number?

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

A 13

B 1

C 42

D 76

E 36

Part 2: Write your answer

19

What is the missing whole number?

$$\frac{31}{7} = \boxed{?} \frac{3}{7}$$

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

20

What is the missing number?

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

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

21

What is the missing number?

$$\frac{47}{9} = 5 \frac{\boxed{?}}{9}$$

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

22

What is the missing number?

$$8 \frac{2}{3} = \frac{\boxed{?}}{3}$$

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

23

A chef cuts each quiche into 6 equal slices. She has 35 slices.

How many whole quiches is that? Find the missing whole number.

$$\frac{35}{6} = \boxed{?} \frac{5}{6}$$

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

24

What is the missing number?

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

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 ☐

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

19		22	
20		23	
21		24	

Answers

For a parent to mark with. One mark for each question: the paper is out of 24. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	C $3\frac{5}{6}$	$23 \div 6 = 3 \text{ r } 5$, because $3 \times 6 = 18$. So $3\frac{5}{6}$. The bottom stays 6.
2	E $14\frac{1}{3}$	$4 \times 3 = 12$ thirds, and $12 + 2 = 14$ thirds: $14\frac{1}{3}$.
3	A 3	$3 \times 8 = 24$, and $29 - 24 = 5$. So $29\frac{5}{8} = 3\frac{5}{8}$.
4	D 38	$5 \times 7 = 35$ sevenths, and $35 + 3 = 38$ sevenths.
5	B $6\frac{1}{2}$	$26 \div 4 = 6 \text{ r } 2$, so $6\frac{2}{4}$. Simplify the fraction part (divide by 2): $6\frac{1}{2}$.
6	E 5	$45 \div 9 = 5$ with nothing left over, so $45\frac{5}{9} = 5$.
7	C $20\frac{2}{5}$	$20 \div 5 = 4$, so $20\frac{2}{5} = 4$. ($\frac{4}{4}$ is 1, $\frac{12}{4}$ is 3 and $\frac{8}{4}$ is 2.)
8	A 4 and 5	$19 \div 4 = 4 \text{ r } 3$, so $19\frac{3}{4} = 4\frac{3}{4}$: more than 4 and less than 5.
9	D $2\frac{5}{8}$	$21 \div 8 = 2 \text{ r } 5$: 2 whole cakes and 5 slices out of 8, so $2\frac{5}{8}$.
10	B $13\frac{1}{2}$	$6 \times 2 = 12$ halves, and $12 + 1 = 13$ halves: $13\frac{1}{2}$.
11	A $3\frac{1}{5}$ and $31\frac{1}{5}$	$3\frac{1}{5} = \frac{16}{5}$ ($3 \times 5 + 1 = 16$), not $31\frac{1}{5}$. Every other pair is equal.
12	E 11	Each hour has 4 quarter hours, so 2 hours have 8. Add the 3 quarter hours: 11.
13	C 5	$3 \times 9 = 27$, and $32 - 27 = 5$. So $32\frac{5}{9} = 3\frac{5}{9}$.
14	D $13\frac{1}{4}$	$13\frac{1}{4} = 3\frac{1}{4}$, which is between 3 and 4. $16\frac{1}{4}$ is exactly 4, $17\frac{1}{4}$ is more than 4, and $11\frac{1}{4}$ and $9\frac{1}{4}$ are less than 3.
15	B $6\frac{1}{4}$	$50 \div 8 = 6 \text{ r } 2$, so $6\frac{2}{8}$. Simplify the fraction part (divide by 2): $6\frac{1}{4}$.
16	E $5\frac{2}{5}$	$27 \div 5 = 5 \text{ r } 2$, so the ribbon is $5\frac{2}{5}$ metres long.
17	A $3\frac{1}{2}$	$14 \div 4 = 3 \text{ r } 2$, so $3\frac{2}{4}$, which simplifies to $3\frac{1}{2}$.
18	C 42	Each whole is 6 sixths, so 7 wholes are $7 \times 6 = 42$ sixths.
19	4	$4 \times 7 = 28$, and $31 - 28 = 3$. So $31\frac{3}{7} = 4\frac{3}{7}$.
20	53	$6 \times 8 = 48$ eighths, and $48 + 5 = 53$ eighths.
21	2	$5 \times 9 = 45$, and $47 - 45 = 2$.
22	26	$8 \times 3 = 24$ thirds, and $24 + 2 = 26$ thirds.
23	5	$35 \div 6 = 5 \text{ r } 5$, so 35 slices are $5\frac{5}{6}$ quiches: 5 whole quiches.
24	39	$9 \times 4 = 36$ quarters, and $36 + 3 = 39$ quarters.

Score: out of 24