

11+ Maths Practice Paper

Year 4 · Foundation

Lesson 3.2: Mixed numbers and improper fractions

Read this with your child:

1. This paper has **20 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: **25 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

Which of these is an improper fraction?

A $\frac{3}{4}$

B $\frac{7}{5}$

C $\frac{1}{2}$

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

E $\frac{5}{8}$

Answer: B In an improper fraction the top is the same as or bigger than the bottom. 7 is bigger than 5, so $\frac{7}{5}$ is improper.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

Which of these is a mixed number?

A $\frac{9}{4}$

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

C $\frac{2}{3}$

D $\frac{6}{6}$

E $\frac{1}{5}$

2

Which of these is a proper fraction?

A $\frac{5}{3}$

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

C $\frac{8}{8}$

D $\frac{4}{7}$

E $\frac{9}{2}$

3

What whole number is this fraction equal to?

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

A 2

B 4

C 8

D 12

E 32

4

A pizza is cut into 4 equal slices. Sam eats 5 slices, from two pizzas.

What fraction of a pizza does Sam eat?

A $\frac{5}{8}$

B $\frac{4}{5}$

C $\frac{1}{4}$

D $\frac{9}{4}$

E $\frac{5}{4}$

5

What is the missing whole number?

$$\frac{7}{2} = \boxed{?} \frac{1}{2}$$

A 2

B 7

C 3

D 4

E 1

6

Write this fraction as a mixed number.

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

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

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

C $1\frac{3}{5}$

D $5\frac{1}{3}$

E $1\frac{1}{3}$

7

Write this mixed number as an improper fraction.

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

A $\frac{4}{4}$

B $\frac{13}{4}$

C $\frac{3}{4}$

D $\frac{7}{4}$

E $\frac{8}{4}$

8

What is the missing whole number?

$$\frac{9}{4} = \boxed{?} \frac{1}{4}$$

A 1

B 2

C 3

D 4

E 9

9

How many halves make $3\frac{1}{2}$?

A 4

B 5

C 6

D 31

E 7

10

Write this fraction as a mixed number.

$$\frac{11}{5}$$

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

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

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

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

E $3\frac{1}{5}$

11

Which fraction is equal to 2?

A $\frac{6}{3}$

B $\frac{2}{3}$

C $\frac{3}{2}$

D $\frac{4}{8}$

E $\frac{5}{2}$

12

What is the missing number?

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

A 6

B 5

C 21

D 3

E 7

13

A chocolate bar has 5 equal pieces. Ella eats 7 pieces, from two bars.

How many bars does she eat, as a mixed number?

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

B $1\frac{5}{7}$

C $7\frac{1}{5}$

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

E $1\frac{3}{5}$

14

Which improper fraction is equal to this mixed number?

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

A $\frac{22}{5}$

B $\frac{12}{5}$

C $\frac{4}{5}$

D $\frac{9}{5}$

E $\frac{10}{5}$

15

Which of these is not equal to 1 whole?

A $\frac{3}{3}$

B $\frac{6}{6}$

C $\frac{6}{5}$

D $\frac{10}{10}$

E $\frac{2}{2}$

16

What is the missing whole number?

$$\frac{17}{4} = \frac{\boxed{?}}{4} - \frac{1}{4}$$

A 4

B 3

C 5

D 17

E 1

Part 2: Write your answer

17

What whole number is this fraction equal to?

$$\frac{10}{2} = \boxed{?}$$

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

18

What is the missing number?

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

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

19

What is the missing number?

$$\frac{13}{5} = 2\frac{\boxed{?}}{5}$$

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

20

What is the missing number?

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

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

Answer sheet

11+ Maths Practice Paper · Year 4 · Lesson 3.2: Mixed numbers and improper 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 ☐

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

17	
18	

19	
20	

Answers

For a parent to mark with. One mark for each question: the paper is out of 20. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	B $3\frac{1}{2}$	A mixed number has a whole number and a proper fraction together: 3 and $\frac{1}{2}$.
2	D $\frac{4}{7}$	In a proper fraction the top is smaller than the bottom. 4 is smaller than 7.
3	A 2	$8 \div 4 = 2$ with nothing left over, so $\frac{8}{4} = 2$. Four quarters make one whole, so eight quarters make two.
4	E $\frac{5}{4}$	Each slice is $\frac{1}{4}$ of a pizza, and Sam eats 5 of them: $\frac{5}{4}$. The bottom is 4 because each pizza is cut into quarters.
5	C 3	$7 \div 2 = 3$ r 1. The whole number is 3 and the 1 left over is a half: $3\frac{1}{2}$.
6	A $1\frac{2}{3}$	$5 \div 3 = 1$ r 2. The whole number is 1 and the remainder, 2, goes over 3: $1\frac{2}{3}$.
7	D $\frac{7}{4}$	$1 \times 4 = 4$ quarters, and $4 + 3 = 7$ quarters: $\frac{7}{4}$. ($\frac{13}{4}$ joins the 1 and the 3 together, which does not work.)
8	B 2	$9 \div 4 = 2$ r 1, so $\frac{9}{4} = 2\frac{1}{4}$.
9	E 7	Each whole is 2 halves, so 3 wholes are $3 \times 2 = 6$ halves. Add the 1 half: 7 halves.
10	C $2\frac{1}{5}$	$11 \div 5 = 2$ r 1. The whole number is 2 and the remainder, 1, goes over 5: $2\frac{1}{5}$.
11	A $\frac{6}{3}$	$6 \div 3 = 2$ with nothing left over, so $\frac{6}{3} = 2$.
12	E 7	2 wholes are $2 \times 3 = 6$ thirds. Add the 1 third: $6 + 1 = 7$. So $2\frac{1}{3} = \frac{7}{3}$.
13	D $1\frac{2}{5}$	$7 \div 5 = 1$ r 2. That is 1 whole bar and 2 more pieces out of 5: $1\frac{2}{5}$.
14	B $\frac{12}{5}$	$2 \times 5 = 10$ fifths, and $10 + 2 = 12$ fifths: $\frac{12}{5}$.
15	C $\frac{6}{5}$	A fraction is 1 whole when its top and bottom are the same. In $\frac{6}{5}$ the top is bigger, so it is more than 1: $1\frac{1}{5}$.
16	A 4	$17 \div 4 = 4$ r 1, because $4 \times 4 = 16$. So $\frac{17}{4} = 4\frac{1}{4}$.
17	5	$10 \div 2 = 5$ with nothing left over.
18	5	$1 \times 3 = 3$ thirds, and $3 + 2 = 5$ thirds.
19	3	$13 \div 5 = 2$ r 3, so the top of the fraction part is 3.
20	15	$3 \times 4 = 12$ quarters, and $12 + 3 = 15$ quarters.

Score: out of 20