



# EXAM PAPERS PRACTICE

## Fractions

### Question Paper

## Question 1

Work out the value of

$$\frac{-\frac{1}{2} - \frac{3}{8}}{-\frac{1}{2} + \frac{3}{8}}.$$

[2]

## Question 2

Write down all the working to show that  $\frac{\frac{3}{5} + \frac{2}{3}}{\frac{3}{5} \times \frac{2}{3}} = 3\frac{1}{6}$  [3]

## Question 3

Jiwan incorrectly wrote  $1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} = 1\frac{3}{9}$ . [3]

Show the correct working and write down the answer as a mixed number.

#### Question 4

Show that  $3^{-2} + 2^{-2} = \frac{13}{36}$ . [2]

Write down all the steps of your working.

#### Question 5

Show that  $1\frac{5}{9} \div 1\frac{7}{9} = \frac{7}{8}$ . [2]

Write down all the steps in your working.

## Question 6

(a) Find the value of  $x$  when  $\frac{18}{24} = \frac{27}{x}$ . [1]

(b) Show that  $\frac{2}{3} \div 1\frac{1}{6} = \frac{4}{7}$ . [2]  
Write down all the steps in your working.

## Question 7

Show that  $\frac{7}{27} + 1\frac{7}{9} = 2\frac{1}{27}$ . [2]

Write down all the steps in your working.

### Question 8

Write down the number which is 3.6 less than  $-4.7$ .

[1]

### Question 9

Show that  $3\frac{3}{4} + 1\frac{1}{3} = 5\frac{1}{12}$ .

[2]

Write down all the steps in your working.

### Question 10

Write as a single fraction  $\frac{3a}{8} + \frac{4}{5}$ .

[2]

## Question 11

(a)  $\frac{2}{3} + \frac{5}{6} = \frac{x}{2}$

[1]

Find the value of  $x$ .

(b)  $\frac{5}{3} \div \frac{3}{y} = \frac{40}{9}$

[1]

Find the value of  $y$ .

## Question 12

Without using your calculator, work out the following.  
Show all the steps of your working and give each answer as a fraction in its simplest form.

(a)  $\frac{11}{12} - \frac{1}{3}$  [2]

(b)  $\frac{1}{4} \div \frac{11}{13}$  [2]



### Question 13

**Without using a calculator**, work out  $1\frac{2}{3} - \frac{11}{15}$ .

Write down all the steps of your working and give your answer as a fraction in its lowest terms. [3]

### Question 14

(a) Write  $\frac{11}{3}$  as a mixed number. [1]

(b) **Without using a calculator**, work out  $\frac{1}{4} + \frac{5}{12}$ .  
Show all the steps of your working and give your answer as a fraction in its lowest terms. [2]





### Question 15

**Without using a calculator**, work out  $1\frac{2}{3} + \frac{5}{7}$ .

[3]

Write down all the steps of your working and give your answer as a mixed number in its simplest form.



## Question 16

Without using your calculator, work out  $\frac{11}{12} - \left(\frac{3}{4} - \frac{2}{3}\right)$ .

[4]

You must show all your working and give your answer as a fraction in its simplest form.



### Question 17

**Without using your calculator**, work out  $3\frac{1}{3} \div 2\frac{1}{2}$ .

You must show all your working and give your answer as a mixed number in its simplest form. [3]

### Question 18

**Without using a calculator**, work out  $\frac{6}{7} \div 1\frac{2}{3}$ .

Show all your working and give your answer as a fraction in its lowest terms. [3]



### Question 19

Without using a calculator, show that  $\left(\frac{49}{16}\right)^{-\frac{3}{2}} = \frac{64}{343}$ .

[2]

Write down all the steps in your working.

### Question 20

Write  $\frac{1}{c} + \frac{1}{d} - \frac{c-d}{cd}$  as a single fraction in its simplest form.

[3]



### Question 21

Work out the value of  $1 + \frac{2}{3 + \frac{4}{5+6}}$ . [2]

### Question 22

$\frac{4c}{5} - \frac{3c}{35} = \frac{10}{7}$ . Find  $c$ . [2]



### Question 36

Without using a calculator, work out  $\frac{5}{6} - \frac{1}{2}$ .

Show all the steps of your working and give your answer as a fraction in its simplest form. [2]

### Question 37

Work out  $\frac{2}{3} - \frac{1}{4}$ , giving your answer as a fraction in its lowest terms.

Do not use a calculator and show all the steps of your working. [2]



### Question 38

**Without using your calculator**, work out  $\frac{3}{4} + \frac{2}{3} - \frac{1}{8}$ .

You must show all your working and give your answer as a mixed number in its simplest form. [4]

### Question 39

**Without using a calculator**, work out  $\frac{3}{5} + \frac{1}{6}$ .

[2]

Write down all the steps of your working and give your answer as a fraction in its simplest form.



### Question 40

**Without using a calculator**, work out  $2\frac{5}{8} \times \frac{3}{7}$ .

Show all your working and give your answer as a mixed number in its lowest terms.

[3]

### Question 41

**Without using a calculator**, work out  $\frac{1}{12} \times 1\frac{1}{5}$ .

Show all your working and give your answer as a fraction in its lowest terms.

[2]





### Question 42

Without using your calculator, work out  $1\frac{7}{12} + \frac{13}{20}$

You must show all your working and give your answer as a mixed number in its simplest form.

[3]

### Question 43

Without using your calculator, work out  $2\frac{1}{4} - \frac{11}{12}$ .

You must show all your working and give your answer as a fraction in its lowest terms.

[3]

### Question 44

Calculate  $\frac{2.07 - 1.89}{5.71 - 3.92}$ . [1]

### Question 45

Write the following as single fractions.

(a)  $x + \frac{x}{2}$  [1]

(b)  $x + \frac{2}{x}$  [1]



### Question 46

Work out  $\frac{2}{3} + \frac{1}{6} - \frac{1}{4}$ , giving your answer as a fraction in its lowest terms.

[3]

Do not use a calculator and show all the steps of your working.

### Question 47

**Without using a calculator**, work out  $1\frac{4}{5} \div \frac{3}{7}$ .

Show all your working and give your answer as a fraction in its lowest terms.

[3]



### Question 48

Without using a calculator, work out  $\frac{4}{5} \div 2 \frac{2}{3}$

Write down all the steps of your working and give your answer as a fraction in its simplest form.

[3]



### Question 23

**Without using a calculator**, work out  $1\frac{7}{8} \div \frac{5}{9}$ .

Show all your working and give your answer as a fraction in its lowest terms.

[3]

### Question 24

**Without using your calculator**, work out  $2\frac{7}{9} \div \frac{5}{6}$ .

Give your answer as a fraction in its lowest terms.  
You must show each step of your working.

[4]



### Question 25

Without using a calculator, work out  $\frac{1}{4} + \frac{1}{6}$ .

Write down all the steps in your working and give your answer as a fraction in its simplest form. [2]

### Question 26

**Without using a calculator**, work out  $1\frac{1}{6} \div \frac{7}{8}$ .

[3]

Show all your working and give your answer as a fraction in its lowest terms.



### Question 27

Without using your calculator, work out  $\frac{5}{6} - \left(\frac{1}{2} \times 1\frac{1}{2}\right)$ .

Write down all the steps of your working.

[3]

### Question 28

Without using a calculator, work out  $1\frac{1}{4} - \frac{7}{9}$ .

Write down all the steps in your working.

[3]

## Question 29

**Do not use a calculator in this question and show all the steps of your working.**

Give each answer as a fraction in its lowest terms.

Work out.

(a)  $\frac{3}{4} - \frac{1}{12}$  [2]

(b)  $2\frac{1}{2} \times \frac{4}{25}$  [2]

## Question 30

Show that  $1\frac{1}{2} \div \frac{3}{16} = 8$ .

Do not use a calculator and show all the steps of your working. [2]





### Question 31

Without using a calculator, work out  $\frac{6}{7} \div 1\frac{2}{3}$ .

Write down all the steps in your working.

[3]

### Question 32

Write down all your working to show that the following statement is correct.

[2]

$$\frac{1 + \frac{8}{9}}{2 + \frac{1}{2}} = \frac{34}{45}$$

**Question 33**

Show that  $\left(\frac{1}{10}\right)^2 + \left(\frac{2}{5}\right)^2 = 0.17$ .

[2]

Write down all the steps in your working.

**Question 34**

Without using your calculator, work out  $1\frac{5}{6} + \frac{9}{10}$ .

You must show your working and give your answer as a mixed number in its simplest form. [3]



### Question 35

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

Work out the value of  $p$ .

**Show all your working.**

[2]