

FRACTIONS, DECIMALS AND PERCENTAGES

Pearson Edexcel - Thursday 24 May 2018 - Paper 1 (Non-Calculator) Higher Tier

2.

1 (a) Work out $2\frac{1}{7} + 1\frac{1}{4}$

.....
(2)

(b) Work out $1\frac{1}{5} \div \frac{3}{4}$

Give your answer as a mixed number in its simplest form.

.....
(2)

.....
(Total for Question 1 is 4 marks)
.....

Pearson Edexcel - Monday 9 June 2014 - Paper 1 (Non-Calculator) Higher Tier

4.

1 (a) Work out $\frac{1}{7} \times \frac{2}{3}$

.....
(1)

(b) Work out $\frac{3}{5} - \frac{1}{3}$

.....
(2)

(Total for Question 1 is 3 marks)

Pearson Edexcel - Wednesday 6 November 2013 - Paper 1 (Non-Calculator) Higher Tier

5.

20 (a) Solve $\frac{4(8x-2)}{3x} = 10$

.....
(3)

(b) Write as a single fraction in its simplest form

$$\frac{2}{y+3} - \frac{1}{y-6}$$

.....
(3)

.....
(Total for Question 20 is 6 marks)

Pearson Edexcel - Monday 11 June 2012 - Paper 1 (Non-Calculator) Higher Tier

6.

24 Express the recurring decimal $0.2\bar{8}1$ as a fraction in its simplest form.

.....
(Total for Question 24 is 3 marks)

Pearson Edexcel - Wednesday 9 November 2011 - Paper 3 (Non-Calculator) Higher Tier

7.

1. Theo earns £20 one weekend.
He gives £4 to his brother.

- (a) Express £4 as a fraction of £20
Give your answer in its simplest form.

.....
(2)

Theo gives £6 to his mother.

- (b) Express £6 as a percentage of £20

..... %
(2)

Theo spent the remaining £10 on bus fares and food.
He spent £1.50 more on bus fares than on food.

- (c) How much did he spend on bus fares?

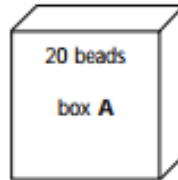
£
(2)

(Total 6 marks)

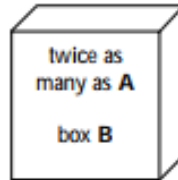
Pearson Edexcel - Friday 12 November 2010 - Paper 4 (Calculator) Higher Tier

8.

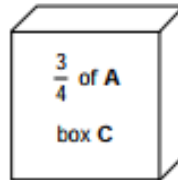
3. There are 20 beads in box **A**.



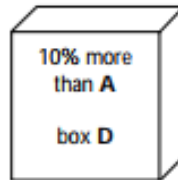
In box **B** there are twice as many beads as in box **A**.



In box **C** there are $\frac{3}{4}$ of the number of beads as in box **A**.



In box **D** there are 10% more beads than in box **A**.



Work out the **total** number of beads in the four boxes.

..... beads

(Total 4 marks)

1. Using the information that

$$74 \times 234 = 17316$$

write down the value of

(a) 740×234

.....
(1)

(b) 74×2.34

.....
(1)

(Total 2 marks)

10.

10 On a plane, $\frac{2}{5}$ of the passengers were British.

30% of the British passengers were men.
There were 36 British men on the plane.

Find the total number of passengers on the plane.

..... [5]

OCR GCSE – Thursday 7 November 2019 – Paper 5 (Non-Calculator) Higher Tier

11.

13 (a) (i) Write $\frac{1}{3}$ as a recurring decimal.

(a)(i) [1]

(ii) Write $\frac{1}{30}$ as a recurring decimal.

(ii) [1]

(b) Simplify fully by rationalising the denominator.

$$\frac{20}{\sqrt{5}}$$

(b) [3]

OCR GSCE – Thursday 6 June 2019 – Paper 5 (Non-Calculator) Higher Tier

12.

10 (a) Write $\frac{1}{6}$ as a recurring decimal.

(a) [2]

(b) Elsa divides a two-digit number by another two-digit number.
She gets the answer 0.15.

She says that there is only one possible pair of numbers that will give this answer.
Is she correct? Show how you decide.

..... [4]

13.

14 (a) Without using a calculator, show that $0.\dot{1}\dot{9}$ can be written as $\frac{19}{99}$. [3]

(b) Explain how $\frac{19}{99} = 0.\dot{1}\dot{9}$ can be used to find $\frac{19}{990}$ as a decimal and write down its value.

.....
..... $\frac{19}{990} =$ [2]

14.

13 (a) Write $\frac{5}{12}$ as a recurring decimal.

(a) [2]

(b) Convert $0.\dot{7}6$ to a fraction.

(b) [2]

15.

12 (a) Write $\frac{5}{6}$ as a recurring decimal.

(a) [2]

(b) Convert $0.12\bar{6}$ to a fraction.
Give your answer in its lowest terms.

(b) [3]

OCR GSCE – Thursday 8 June 2017 – Paper 5 (Non - Calculator) Higher Tier

16.

1 Work out $\frac{2}{15} \times \frac{15}{22}$.

Give your answer in its lowest terms.

..... [2]

OCR GSCE – Thursday 8 June 2017 – Paper 5 (Non - Calculator) Higher Tier

17.

13 (a) Write $\frac{7}{9}$ as a recurring decimal.

(a) [1]

(b) Sally divided a two-digit number by another two-digit number.
Her answer was 3.181818.....

Find two numbers that Sally could have used.

(b) and [3]

OCR GCSE – Sample Papers – Paper 6 (Calculator) Higher Tier

18.

- 15 A unit fraction has a numerator equal to 1, for example $\frac{1}{3}$, $\frac{1}{7}$ and $\frac{1}{25}$.

Unit fractions can be written as the sum of two different unit fractions, for example

$$\frac{1}{2} = \frac{1}{3} + \frac{1}{6}$$

Write each of the following unit fractions as the sum of two **different** unit fractions.

$$\frac{1}{4} = \frac{1}{\square} + \frac{1}{\square}$$

$$\frac{1}{5} = \frac{1}{\square} + \frac{1}{\square}$$

$$\frac{1}{6} = \frac{1}{\square} + \frac{1}{\square}$$

[3]

OCR GCSE – Tuesday 13 June 2017 – Paper 6 (Calculator) Higher Tier

19.

1 Circle the fraction that is equivalent to 4.75

[1 mark]

$$\frac{15}{4}$$

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

$$\frac{21}{4}$$

$$\frac{23}{4}$$

AQA GCSE – Tuesday 19 May 2020 – Paper 1 (Non - Calculator) Higher Tier

20.

4 Circle the reciprocal of $\frac{5}{6}$

[1 mark]

$$\frac{6}{5}$$

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

$$-\frac{1}{6}$$

$$-\frac{6}{5}$$

AQA GCSE – Tuesday 19 May 2020 – Paper 1 (Non - Calculator) Higher Tier

21.

11 As a decimal $\frac{11}{40} = 0.275$

Work out $\frac{33}{400}$ as a decimal.

[2 marks]

Answer _____

22.

19 Circle the expression that is equivalent to $\frac{x}{5} + \frac{x}{10}$

[1 mark]

$$\frac{3x}{10}$$

$$\frac{2x}{15}$$

$$\frac{x}{25}$$

$$\frac{x^2}{50}$$

23.

13 (a) Simplify $\frac{25a}{8} \times \frac{2a}{5}$

Give your answer as a single fraction in its simplest form.

[2 marks]

Answer _____

13 (b) Sofia is trying to simplify $\frac{6c + 10}{2}$

Her method is

divide $6c$ by 2

then

add 10

Evaluate her method.

[1 mark]

AQA GSCE – Tuesday 11 June 2019 – Paper 3 (Calculator) Higher Tier

24.

- 1 Work out £1.50 as a fraction of 60p
Circle your answer.

[1 mark]

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

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

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

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

AQA GSCE – Tuesday 6 November 2018 – Paper 1 (Non - Calculator) Higher Tier

25.

- 5 Work out $8\frac{1}{2} \div 2\frac{2}{3}$

Give your answer as a mixed number.

[4 marks]

Answer _____

AQA GCSE – Monday 12 November 2018 – Paper 3 (Calculator) Higher Tier

26.

2 What is 1.75 kilometres as a fraction of 700 metres?

Circle your answer.

[1 mark]

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

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

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

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

AQA GCSE – Monday 24 May 2018 – Paper 1 (Non - Calculator) Higher Tier

27.

6 The height of Zak is 1.86 metres.

The height of Fred is 1.6 metres.

Write the height of Zak as a fraction of the height of Fred.

Give your answer in its simplest form.

[3 marks]

Answer _____

28.

23 A shopkeeper compares the income from sales of a laptop in March and April.

April

Price	$\frac{1}{5}$ more than March
Number sold	$\frac{1}{4}$ less than March

By what fraction does the income from these sales decrease in April?

[3 marks]

Answer _____

AQA GSCE – Tuesday 12 June 2018 – Paper 3 (Calculator) Higher Tier

29.

- 1 Circle the decimal that is closest in value to $\frac{11}{20}$ [1 mark]
- 0.56 0.6 0.525 0.5

AQA GSCE – Thursday 6 November 2017 – Paper 2 (Calculator) Higher Tier

30.

- 1 Circle the fraction that is equivalent to 3.875 [1 mark]
- $\frac{15}{4}$ $\frac{29}{8}$ $\frac{31}{8}$ $\frac{15}{8}$

AQA GSCE – Wednesday 25 May 2017 – Paper 1 (Non - Calculator) Higher Tier

31.

- 7 $\frac{3}{5}$ of a number is 162 [2 marks]
- Work out the number.

Answer _____

AQA GCSE – Wednesday 25 May 2017 – Paper 1 (Non - Calculator) Higher Tier

32.

15 $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$ and $\frac{1}{9}$ are four fractions.

How many of these fractions convert to a recurring decimal?
Circle your answer.

[1 mark]

0 1 2 3 4

AQA GCSE – Thursday 8 June 2017 – Paper 2 (Calculator) Higher Tier

33.

1 Circle the decimal that is closest in value to $\frac{39}{800}$

[1 mark]

0.04 0.048 0.049 0.05

AQA GCSE – Sample Paper 1 (Non - Calculator) Higher Tier

34.

7 Work out $2\frac{3}{4} \times 1\frac{5}{7}$

Give your answer as a mixed number in its simplest form.

[3 marks]

Answer _____

AQA GCSE – Sample Paper 1 (Non - Calculator) Higher Tier

35.

27 Convert $0.1\dot{7}\dot{2}$ to a fraction in its lowest terms.

[3 marks]

Answer _____

AQA GCSE – Sample Paper 2 (Calculator) Higher Tier

36.

5 In a sale, the original price of a bag was reduced by $\frac{1}{5}$

The sale price of the bag is £29.40

Work out the original price.

[3 marks]

Answer £ _____