Fractions, Decimals and Percentages – 2022 GCSE Mathematics Foundation

1. June/2022/Paper_ J560/ 01/No.8

Write the following in order of size, smallest first.

52.9% $\frac{530}{1000}$ $\frac{9}{17}$ 0.5209

..... , ... , ... , ... **[2]**

2. June/2022/Paper_ J560/ 01/No.9

A pattern is made out of blue tiles and yellow tiles.

$\frac{1}{3}$ of the tiles are blue.

There are 36 yellow tiles.

Work out the **total** number of tiles.

..... **[3]**

3. June/2022/Paper_ J560/ 01/No.10

Work out, using your calculator.

$\sqrt{17.5^2 + 60^2}$

..... **[2]**

4. June/2022/Paper_ J560/ 01/No.13(b)

Here are the ticket prices for a zoo when bought at the gate.

Adult	£22
Child	£18
Family ticket (2 adults and up to 4 children)	£80

(b) All ticket prices are reduced by 15% if bought online rather than at the gate.
Mr and Mrs Morris take their one child to the same zoo.
They buy their tickets online.

What is the lowest possible **total cost** of their tickets?

(b) £ ..... **[4]**

5. June/2022/Paper_ J560/ 01/No.19

A coat is on sale in a shop at a special price of £149.40.
The shop says this is a saving of 17% on their normal price.

Work out the shop's normal price for the coat.

£ ..... **[3]**

6. June/2022/Paper_ J560/ 02/No.1a(iii, iv)

(a) Work out.

(iii) $\frac{1}{7}+\frac{2}{7}$

(iii) ..... **[1]**

(iv) $\frac{1}{2}$ of $1\frac{1}{2}$

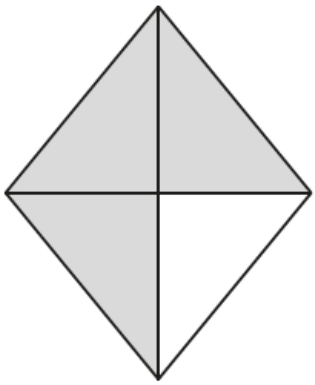
(iv) ..... **[1]**

7. June/2022/Paper_ J560/ 02/No.2

(a) What fraction of this shape is shaded?

(a) ..... **[1]**

(b) What percentage of this shape is shaded?



(b) ..... % **[1]**

(c) Write 0.2 as a fraction.
Give your answer in its simplest form.

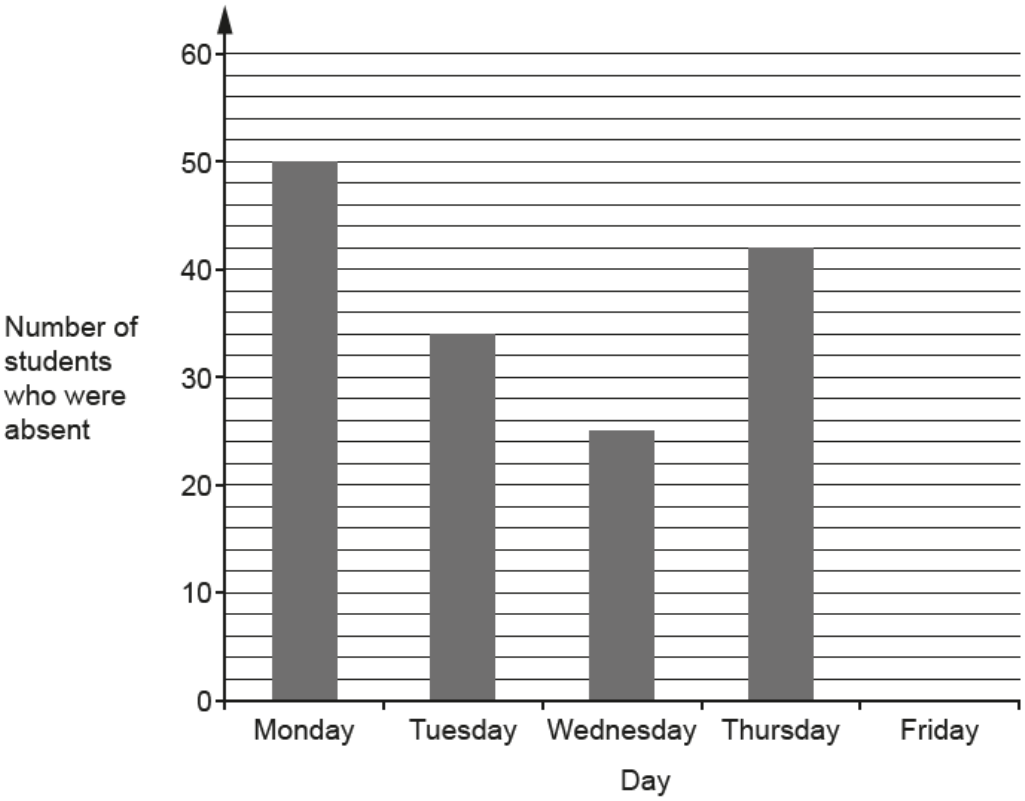
(c) ..... **[2]**

(d) Work out 80% of 30.

(d) ..... **[2]**

8. June/2022/Paper_ J560/ 02/No.6(c)

Taylor has collected data on the number of students who were absent from their school last week.
The bar chart shows the results for the first four days.



(c) There are 600 students in Taylor's school.
Find the percentage of students who were absent from Taylor's school on Thursday.

(c) ..... % **[3]**

9. June/2022/Paper_ J560/ 02/No.8

(a) Work out.

(i) $3.08 + 0.82$

(a)(i) ..... **[1]**

(ii) $7.7 \div 11$

(ii) ..... **[1]**

(b) Work out.

$(2.1 - \frac{3}{5}) \times 0.3$

Give your answer as a decimal.

(b) ..... **[3]**

10. June/2022/Paper_ J560/ 03/No.6

A test has 20 questions.

Amaya attempts all of the questions.
She gets 65% of the questions correct.
Kai gets six of the questions wrong.

Who has the smallest number of questions wrong?
Show working to support your answer.

..... because .....

..... **[3]**

11. June/2022/Paper_ J560/ 03/No.11

Mr Fox invests £400 in a savings account that pays 3% simple interest per year.

Work out the **total** amount of interest Mr Fox will have earned at the end of the 5th year.

£ ..... **[2]**

12. June/2022/Paper_ J560/ 03/No.12

Frankie goes on holiday.
They change £375 into euros (€) at a rate of £1 = €1.15.
They spend €217.49 of this money.
After the holiday, Frankie changes the remaining euros back into pounds at a rate of £1 = €1.28.

Work out how many pounds Frankie gets back.

£ ..... **[4]**

13. June/2022/Paper_ J560/ 03/No.13

In a fish tank, the fish are either blue or gold or red.

There are 22 red fish.

$\frac{2}{5}$ of the fish are blue.

$\frac{5}{12}$ of the fish are gold.

Work out the total number of fish in the fish tank.
You must show your working.

..... **[5]**

14. June/2022/Paper_ J560/ 03/No.24(a)

1600 fish are released into a new lake which has no fish.
The number of fish is expected to increase by 5% each year.

(a) The table shows the expected number of fish in the lake at the end of 1 year and at the end of 2 years.

Complete the table.
Round your answers to the nearest integer.

Years after release	0	1	2	3	4
Expected number of fish	1600	1680	1764		

[3]

15. June/2022/Paper_ J560/ 03/No.25

A garage is trying to sell a car.
The price of the car is normally £18000.

In a sale, the price of the car is reduced by 30%.
As a special offer, the sale price is then reduced by r%.
The special offer price is £9450.

Find the value of r.
You must show your working.

$r =$ ..... **[5]**