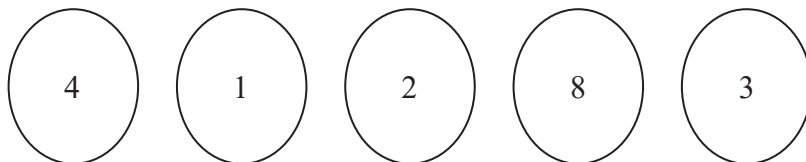


Answer ALL TWENTY ONE questions.

Write your answers in the spaces provided.

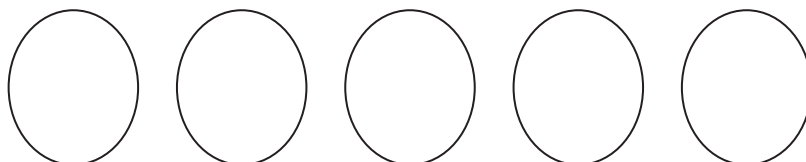
You must write down all the stages in your working.

- 1 Here are five discs.
Each disc has a number on it.



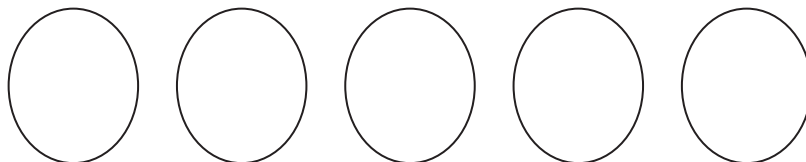
These five discs are arranged to make the number 41283

- (a) Show how all five discs can be arranged to make the smallest number.



(1)

- (b) Show how all five discs can be arranged to make the largest **even** number.



(1)

- (c) Which of the five numbers on the discs are factors of 21?

.....
(2)





- (d) Which of the five numbers on the discs are prime numbers?

.....
(2)

(Total for Question 1 is 6 marks)



- 2 The pictogram shows information about the number of emails Sophie received on each of four days.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:



represents: 4 emails

- (a) On which of Monday, Tuesday, Wednesday or Thursday did Sophie receive the least number of emails?

.....
(1)

- (b) Find the ratio of the number of emails Sophie received on Monday to the number of emails Sophie received on Tuesday.
Give your ratio in its simplest form.

.....
(2)

On Friday, Sophie received 14 emails.

- (c) Show this information on the pictogram.

(1)

On Friday, 6 of the 14 emails Sophie received were from Kamil.

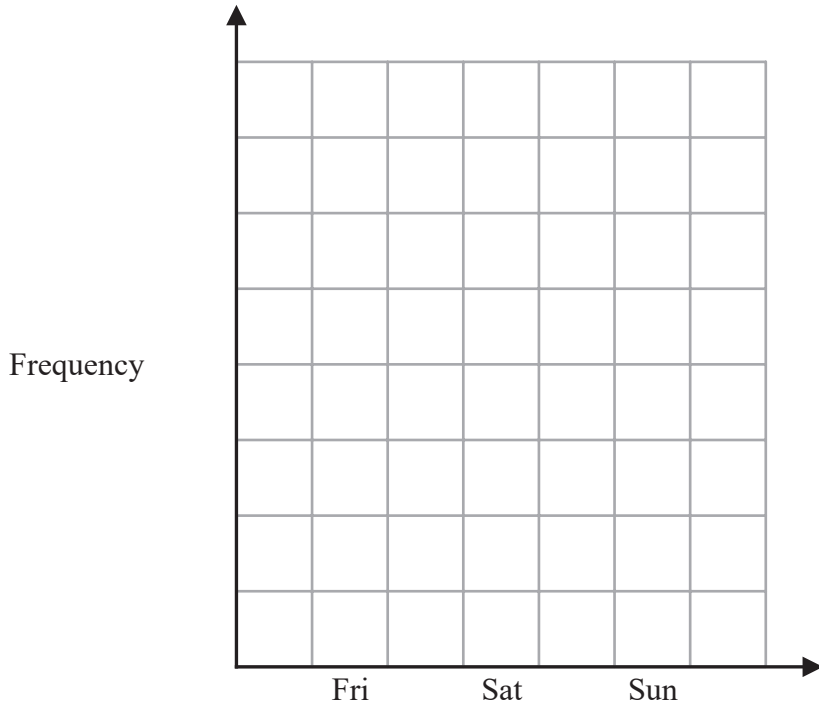
- (d) Write 6 as a fraction of 14
Write your fraction in its simplest form.

.....
(2)



On Friday, Sophie received 14 emails, on Saturday she received 11 emails and on Sunday she received 6 emails.

- (e) Draw a bar chart to show the number of emails Sophie received on each of Friday, Saturday and Sunday.
Complete the frequency axis.



(2)

(Total for Question 2 is 8 marks)

- 3 (a) Complete the following estimates by writing a suitable metric unit on each of the dotted lines.

(i) The distance from Paris to Berlin is about 1000

(ii) A bucket holds about 5 of water.

(iii) The area of the screen of a mobile phone is about 90

(3)

- (b) Write down an estimate for the height of a bedroom door in a house.
Use a suitable metric unit.

.....



(2)

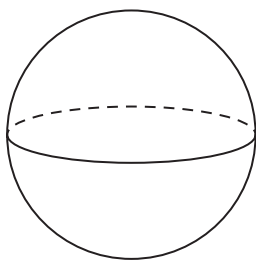
(Total for Question 3 is 5 marks)



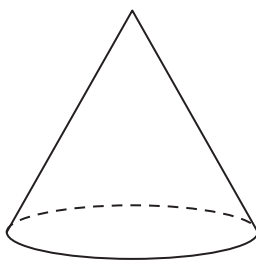
4 Here are three 3D shapes, A, B and C.

(a) Write down the mathematical name for each of these 3D shapes.

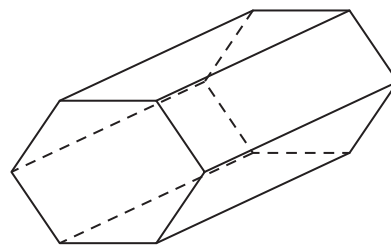
A



B



C



(i)

(ii)

(iii)

(3)

(b) (i) How many faces does shape C have?

.....

(ii) How many vertices does shape C have?

.....

(2)

Here is a solid prism made from bricks.
The bricks are identical triangular prisms.

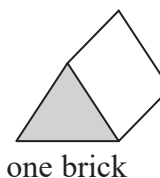
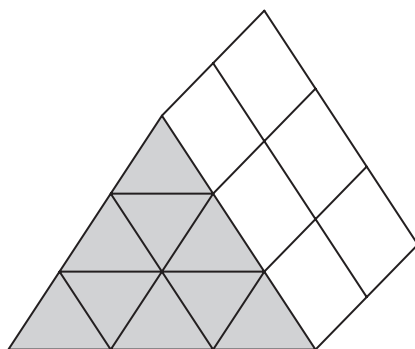


Diagram NOT accurately drawn

The volume of the prism is 54 cm^3

(c) Work out the volume of each brick.

..... cm^3

(2)

(Total for Question 4 is 7 marks)



5 The table shows the temperature recorded in Amsterdam at 6 am on each of five days.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature (°C)	-5	-1	4	3	-6

(a) What is the range of the temperatures in the table?

.....°C
(2)

(b) What is the median of the temperatures in the table?

.....°C
(2)

(c) What percentage of the temperatures in the table are lower than 0°C?

.....%
(2)

On Saturday of the same week, the temperature recorded in Amsterdam at 6 am was 8°C higher than the temperature recorded at 6 am on Friday.

(d) What was the temperature recorded in Amsterdam at 6 am on Saturday?

.....°C
(2)

(Total for Question 5 is 8 marks)



6 Mikhal has 1200 grams of cake mixture.

He is going to make 3 cakes, cake *A*, cake *B* and cake *C*.

$\frac{4}{15}$ of the weight of the cake mixture will be used to make cake *A*.

The rest of the cake mixture will be used to make cake *B* and cake *C*.

The weight of the cake mixture used to make cake *B* and the weight of the cake mixture used to make cake *C* will be in the ratio 3 : 8

Work out the weight of the cake mixture used to make each of cake *A*, cake *B* and cake *C*.

Cake *A* grams

Cake *B* grams

Cake *C* grams

(Total for Question 6 is 4 marks)

