1. Nov/2021/Paper_11/No.16

A 4-sided spinner numbered 1 to 4 is spun many times.
The table shows the results of the spins.

Number	Frequency
1	6
2	5
3	13
4	p

(a) The mean of the results is 3.

Calculate the value of p.

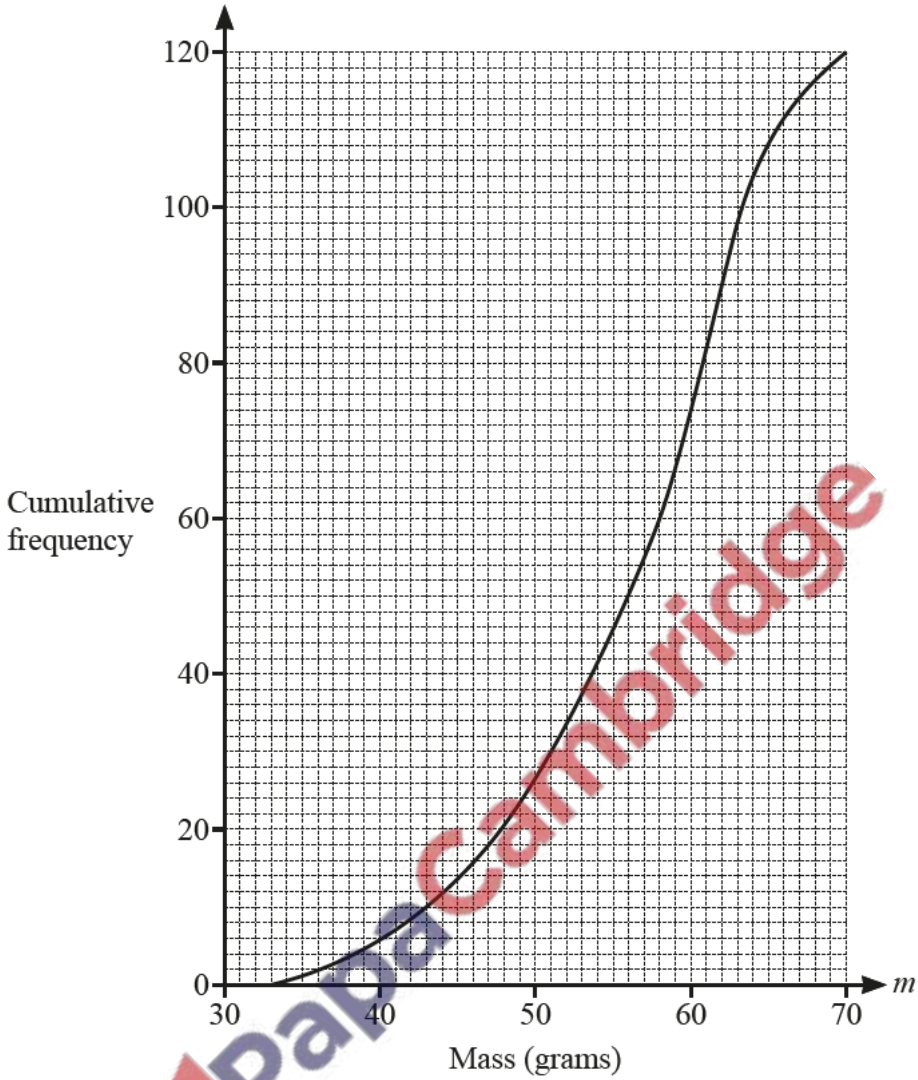
$p =$ ..... [3]

(b) Find the relative frequency of the spinner landing on 2.

..... [1]

2. Nov/2021/Paper_12/No.21

The cumulative frequency diagram shows the masses, m grams, of 120 eggs.



(a) Use the diagram to estimate

(i) the median,

..... g [1]

(ii) the interquartile range.

..... g [2]

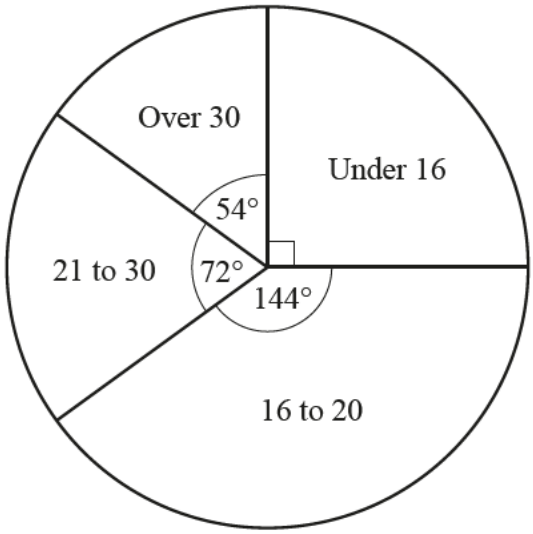
(b) Eggs are described as 'large' if their mass is 63 g or more.

How many of these eggs are large?

..... [2]

3. Nov/2021/Paper_22/No.2

(a) The pie chart summarises the ages of people at a science fair.



(i) Write down the modal class.

..... [1]

(ii) There were 90 people aged over 30 at the science fair.

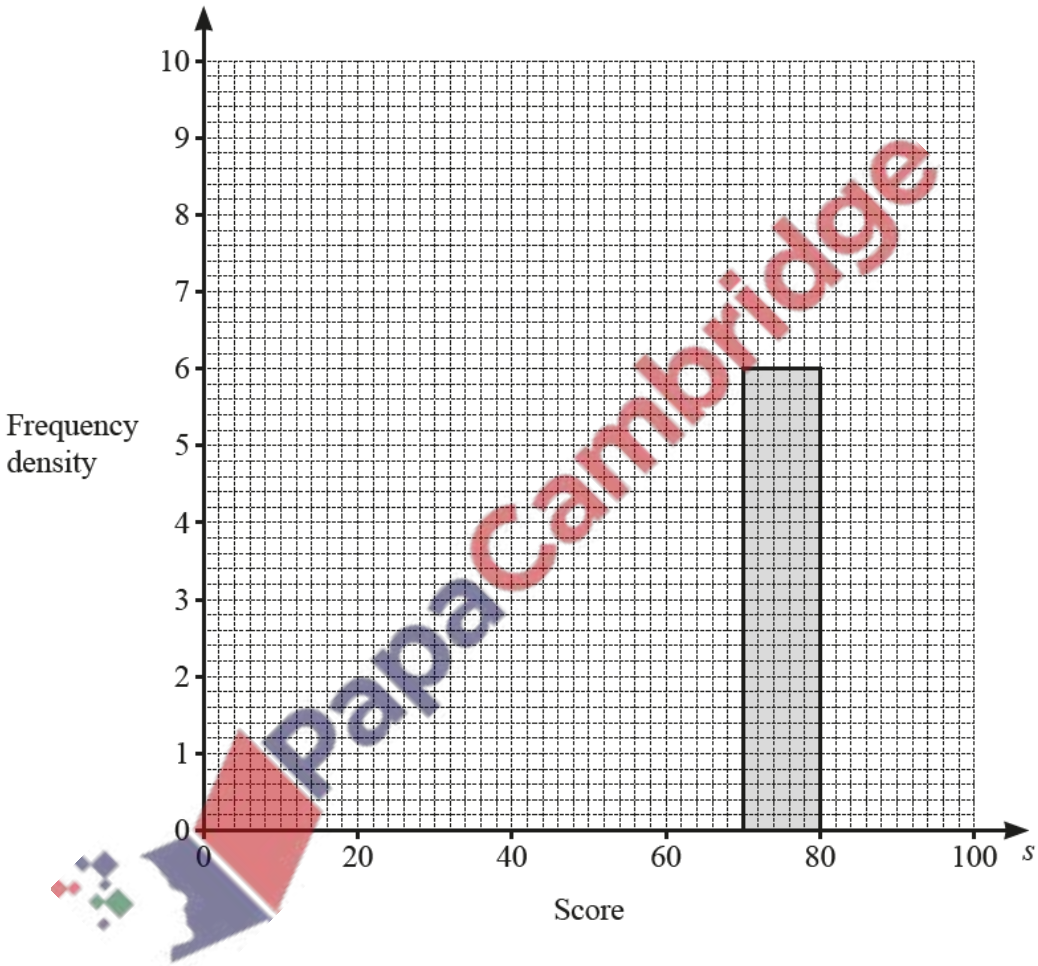
Calculate the number of people aged 16 to 20.

..... [2]

(b) 250 students entered a science competition.
The table summarises their scores.

Score (s)	$0 < s \leqslant 40$	$40 < s \leqslant 60$	$60 < s \leqslant 70$	$70 < s \leqslant 80$	$80 < s \leqslant 100$
Frequency	36	48	64	60	42

(i) Complete the histogram to represent this data.



[3]

(ii) Students who scored 75 or more are awarded a distinction.

Find an estimate for the percentage of the 250 students who were awarded a distinction.

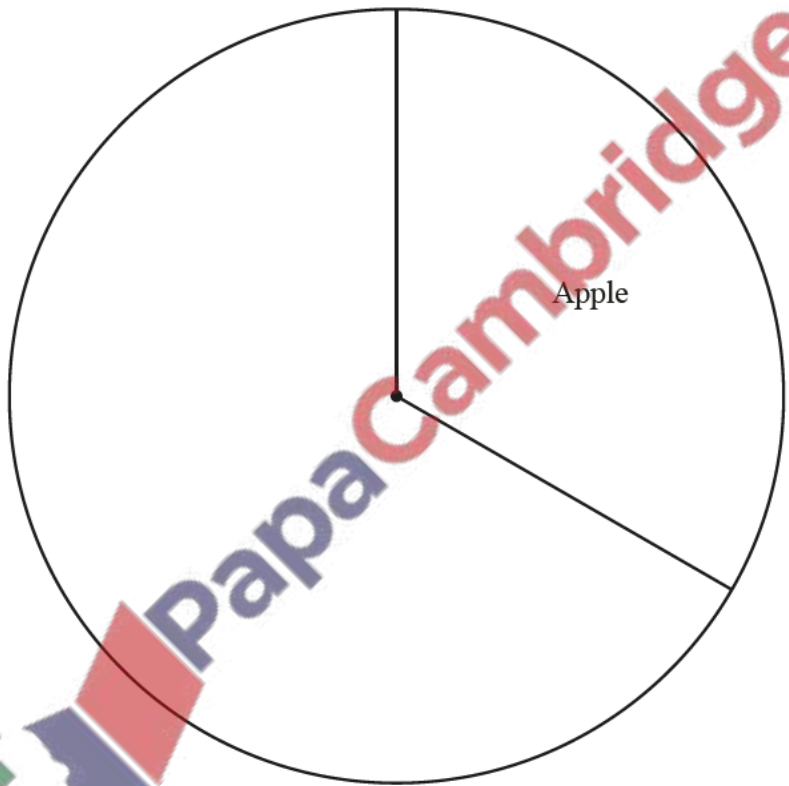
.....% [2]

4. June/2021/Paper_12/No.3

A group of 60 students were each asked their favourite fruit.
The results are shown in the table.

Fruit	Frequency
Apple	20
Banana	25
Orange	15

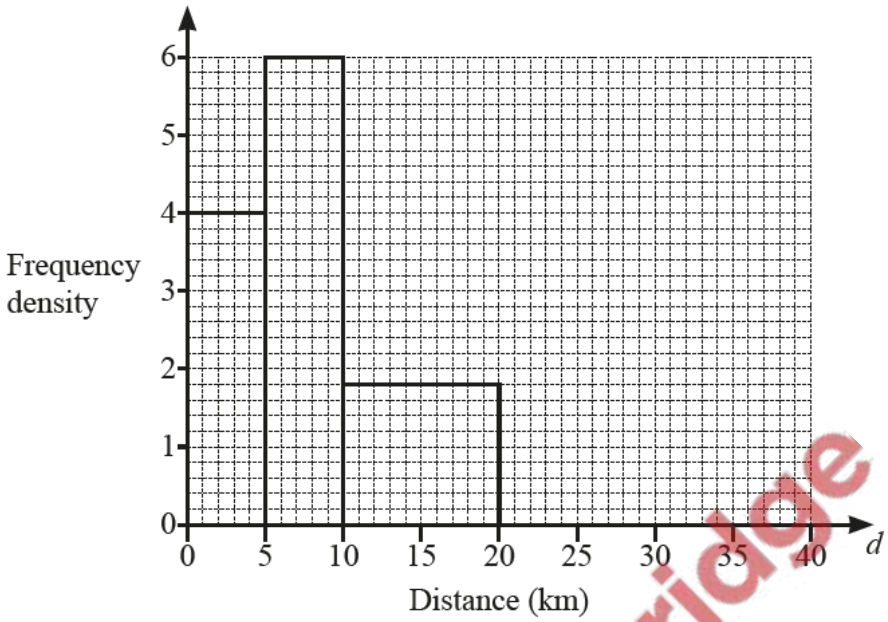
Complete the pie chart to show the results.



[2]

5. June/2021/Paper_12/No.24

A group of office workers are each asked to record the distance, d kilometres, they travel to work. The results for some of their journeys are shown in the histogram.



There were 20 workers in the $0 < d \leqslant 5$ group.

(a) There were 12 workers in the $20 < d \leqslant 40$ group.

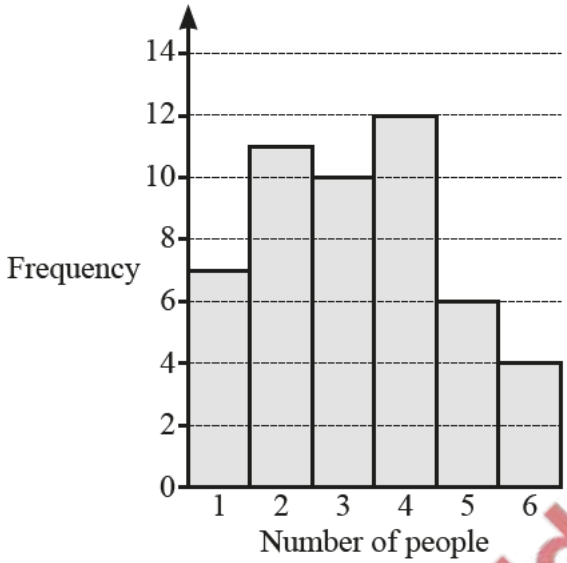
Complete the histogram. [1]

(b) Calculate the percentage of workers who travelled more than 20 km to work.

..... % [3]

6. June/2021/Paper_21/No.2

A survey recorded the number of people living in each of 50 houses.
The bar chart shows the results.



(a) Find the mode.

..... [1]

(b) Find the median.

..... [1]

(c) Calculate the mean.

..... [3]

(d) One of these houses is chosen at random.

Find the probability that exactly 3 people live there.

..... [1]

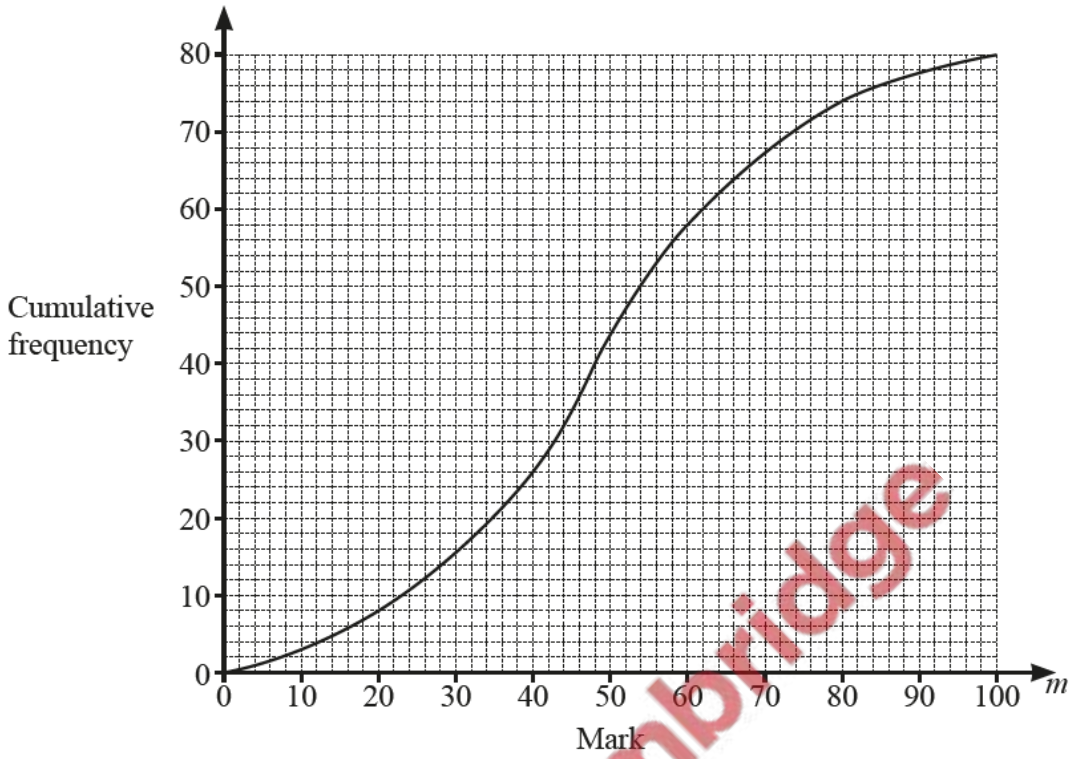
(e) Two houses are chosen at random from these 50 houses.

Find the probability that only one of the two houses has exactly 5 people living there.

..... [3]

7. June/2021/Paper_21/No.9

(a) The cumulative frequency diagram shows the marks obtained by 80 students in a Maths test.



(i) Use the diagram to find an estimate of the median.

..... [1]

(ii) 60% of the students passed the test.

Use the diagram to find the number of marks needed to pass the test.

..... [2]

(iii) Using the information on the diagram, complete the frequency table.

Mark (m)	$0 \leqslant m < 20$	$20 \leqslant m < 40$	$40 \leqslant m < 60$	$60 \leqslant m < 80$	$80 \leqslant m < 100$
Frequency	8				

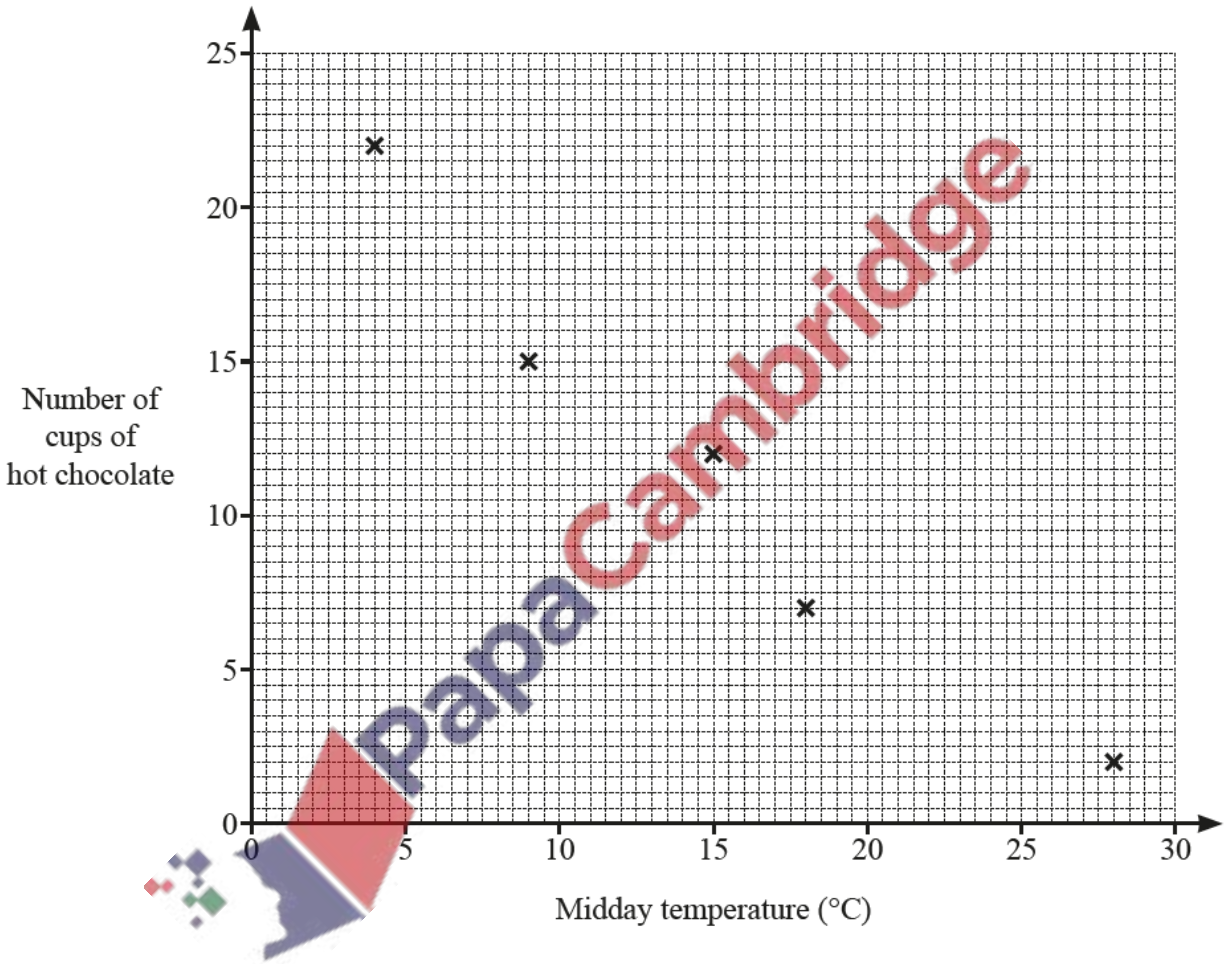
[2]

8. June/2021/Paper_22/No.2

The table shows the midday temperature and the number of cups of hot chocolate Natcha sells on each of ten days.

Midday temperature (°C)	18	9	4	28	15	21	6	5	12	23
Number of cups of hot chocolate	7	15	22	2	12	8	17	21	16	6

(a) Complete the scatter diagram.
The first 5 points have been plotted for you.



[2]

(b) Describe the relationship between the midday temperature and the number of cups of hot chocolate Natcha sells.

.....

..... [1]

(c) By drawing a line of best fit, estimate the number of cups of hot chocolate sold when the midday temperature is 17 °C.

..... [2]