

GCSE Grade 4

Maths

Booklet 6

Paper 3H

Calculator

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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

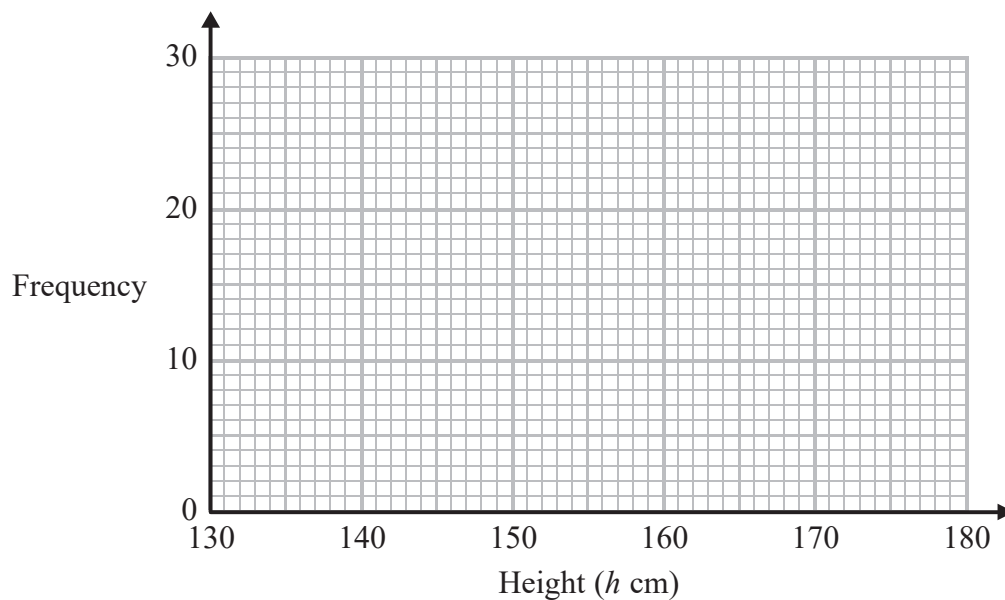
- 1** The table shows information about the heights of 80 children.

Height (h cm)	Frequency
$130 < h \leq 140$	4
$140 < h \leq 150$	11
$150 < h \leq 160$	24
$160 < h \leq 170$	22
$170 < h \leq 180$	19

- (a) Find the class interval that contains the median.

(1)

- (b) Draw a frequency polygon for the information in the table.



(2)

(Total for Question 1 is 3 marks)



- 2 In London, 1 litre of petrol costs 108.9p
In New York, 1 US gallon of petrol costs \$2.83

1 US gallon = 3.785 litres
£1 = \$1.46

In which city is petrol better value for money, London or New York?
You must show your working.

(Total for Question 2 is 3 marks)

- 3 A gold bar has a mass of 12.5 kg.

The density of gold is 19.3 g/cm³

Work out the volume of the gold bar.
Give your answer correct to 3 significant figures.

..... cm³

(Total for Question 3 is 3 marks)



- 4 There are only blue pens, green pens and red pens in a box.

The ratio of the number of blue pens to the number of green pens is 2 : 5

The ratio of the number of green pens to the number of red pens is 4 : 1

There are less than 100 pens in the box.

What is the greatest possible number of red pens in the box?

(Total for Question 4 is 3 marks)

- 5 (a) Find the value of the reciprocal of 1.6
Give your answer as a decimal.

(1)

Jess rounds a number, x , to one decimal place.

The result is 9.8

- (b) Write down the error interval for x .

(2)

(Total for Question 5 is 3 marks)

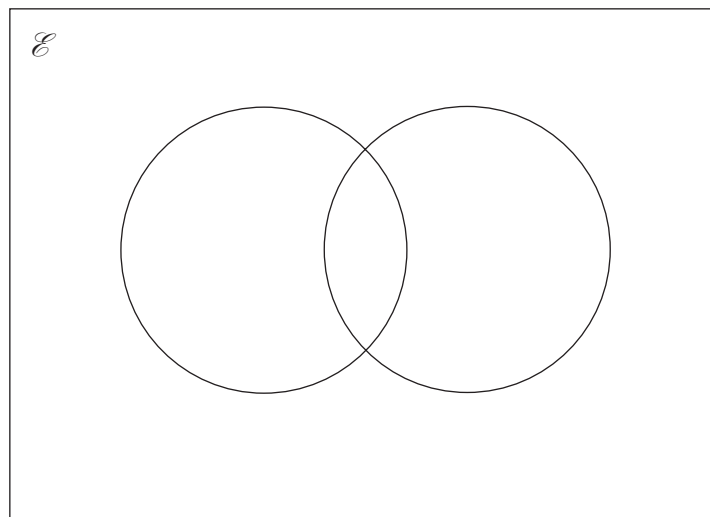


6 $\mathcal{E} = \{\text{odd numbers less than } 30\}$

$A = \{3, 9, 15, 21, 27\}$

$B = \{5, 15, 25\}$

(a) Complete the Venn diagram to represent this information.



(4)

A number is chosen at random from the universal set, \mathcal{E} .

(b) What is the probability that the number is in the set $A \cup B$?

(2)

(Total for Question 6 is 6 marks)



7 Solve the simultaneous equations

$$\begin{aligned}3x + y &= -4 \\ 3x - 4y &= 6\end{aligned}$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question 7 is 3 marks)



- 8 The table shows some information about the dress sizes of 25 women.

Dress size	Number of women
8	2
10	9
12	8
14	6

- (a) Find the median dress size.

(1)

3 of the 25 women have a shoe size of 7

Zoe says that if you choose at random one of the 25 women, the probability that she has either a shoe size of 7 or a dress size of 14 is $\frac{9}{25}$ because

$$\frac{3}{25} + \frac{6}{25} = \frac{9}{25}$$

- (b) Is Zoe correct?

You must give a reason for your answer.

(1)

(Total for Question 8 is 2 marks)



- 9 Daniel bakes 420 cakes.
He bakes only vanilla cakes, banana cakes, lemon cakes and chocolate cakes.

$\frac{2}{7}$ of the cakes are vanilla cakes.

35% of the cakes are banana cakes.

The ratio of the number of lemon cakes to the number of chocolate cakes is 4:5

Work out the number of lemon cakes Daniel bakes.

.....
(Total for Question 9 is 5 marks)

