Name: _____

Maths Genie Stage 4

Test B

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- **Calculators may not be used.**

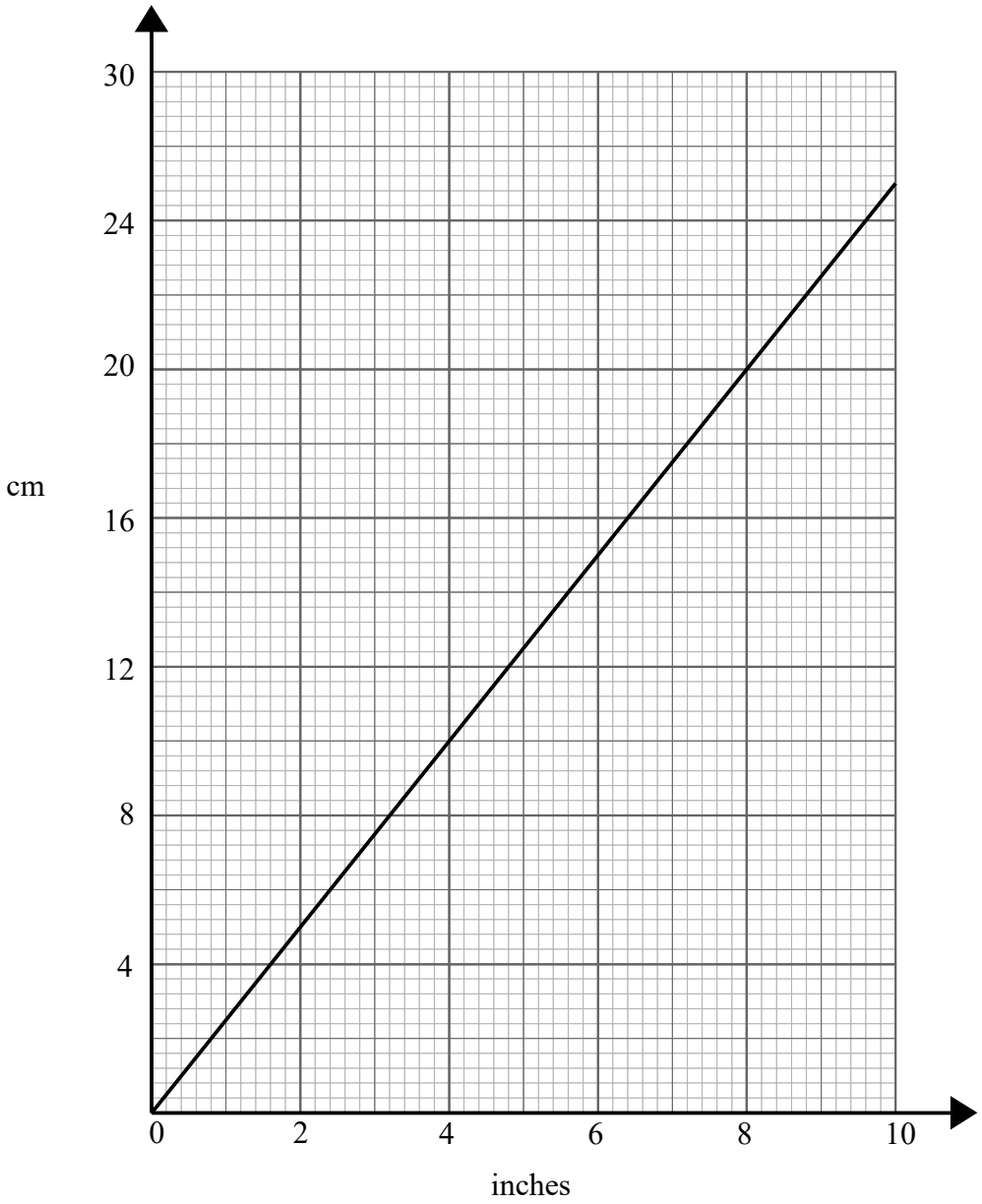
Information

- The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 You can use this graph to change between inches and centimetres.



(a) Change 5 inches to cm.

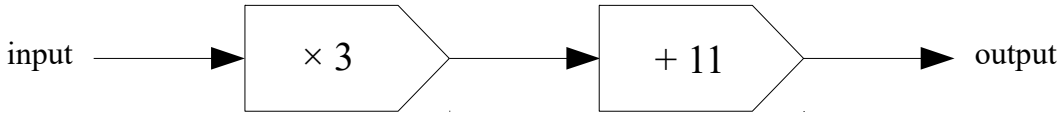
…..... cm
(1)

(b) Change 45 cm to inches

…..... inches
(2)

(Total for Question 1 is 3 marks)

2 Here is a number machine.



(a) Find the output when the input is 5

.....

(1)

(b) Find the output when the input is –2

.....

(1)

(c) Find the input when the output is 32

.....

(2)

(Total for Question 2 is 4 marks)

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3 A model plane has the length of 20cm.

The scale of the model is 1:360

Work out the length of the real plane.
Give your answer in metres.

.....m

(Total for Question 3 is 2 marks)

4 Work out 184% of 140.

.....

(Total for Question 4 is 2 marks)

5 There are only blue counters, red counters and yellow counters in a bag.

There are twice as many blue counters as yellow counters.
There are three times as many red counters as yellow counters.

Write down the ratio of blue counters to red counters to yellow counters.

.....

(Total for Question 5 is 2 marks)

6 (a) Work out $\frac{2}{3} - \frac{1}{4}$

.....

(2)

(b) Work out $\frac{3}{4} \times \frac{4}{9}$

Give your answer as a fraction in its simplest form.

.....

(2)

(Total for Question 6 is 4 marks)

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7 Work out the difference between $\frac{2}{5}$ of 45 and $\frac{3}{7}$ of 35

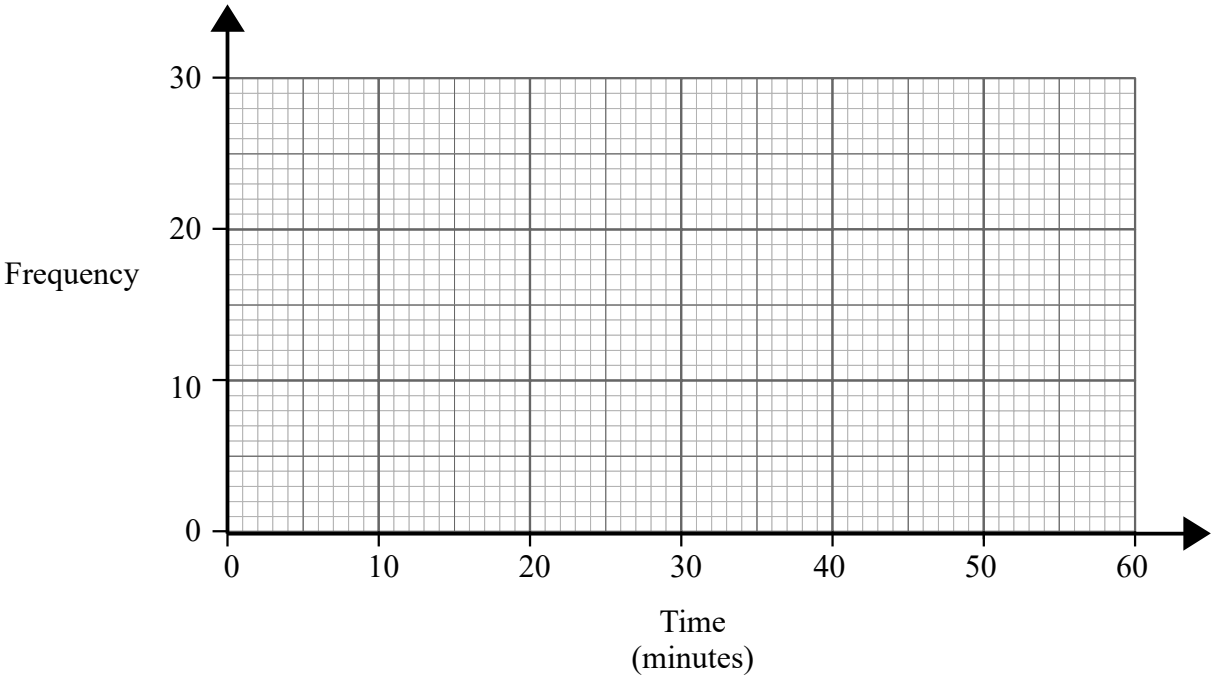
.....

(Total for Question 7 is 3 marks)

8 The frequency table shows the time taken for 100 people to travel to an event.

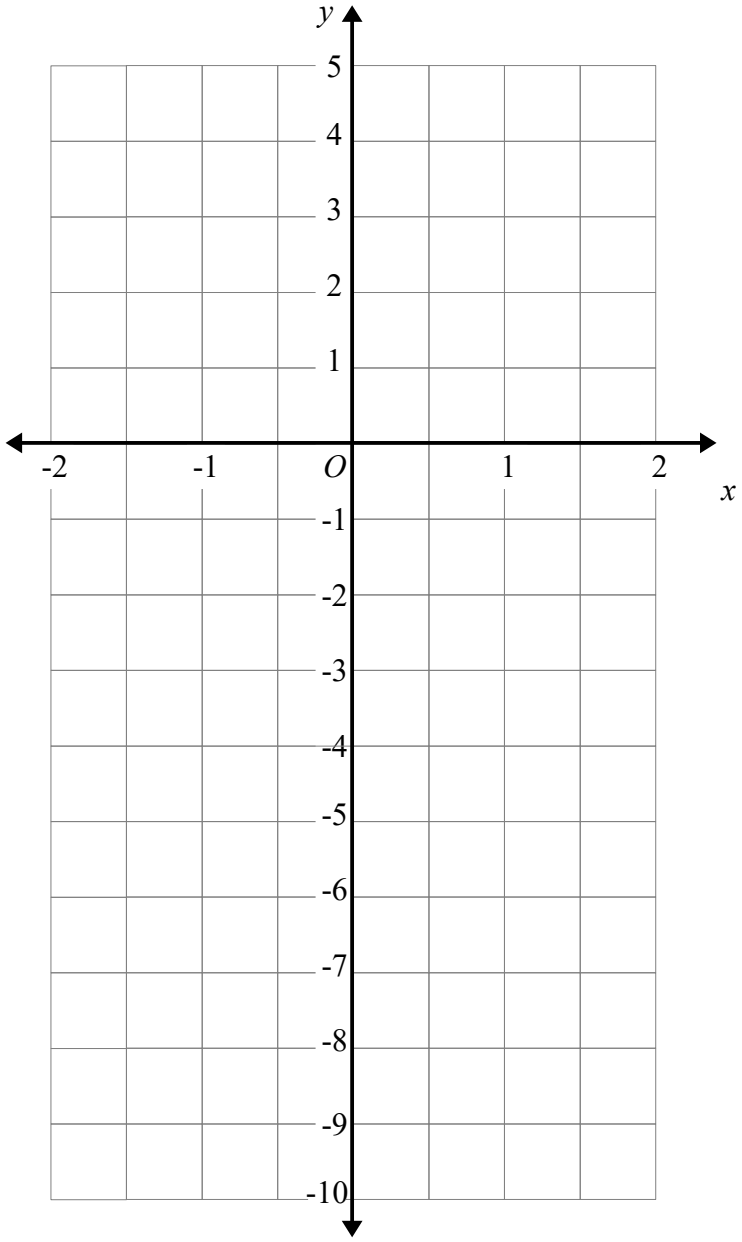
Time (minutes)	Frequency
$0 < t \leqslant 10$	8
$10 < t \leqslant 20$	19
$20 < t \leqslant 30$	27
$30 < t \leqslant 40$	23
$40 < t \leqslant 50$	11
$50 < t \leqslant 60$	14

Draw a frequency polygon to show this information.



(Total for Question 8 is 2 marks)

9 On the grid, draw the graph of $y = 3x - 3$ for values of x from -2 to 2



(Total for Question 9 is 3 marks)