Name: _____

<div style="border:1px solid">

Maths Genie Stage 3

Test D

</div>

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 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

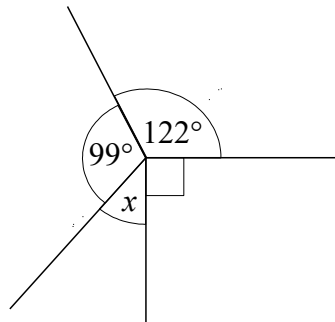**1**   Write a number in each box to make the calculation correct.

(i) $\boxed{}$ + 7 = 43

(1)

(ii)   51 = 84 − $\boxed{}$

(1)

(Total for Question 1 is 2 marks)

2 $H = f - 2g$

Work out the value of H when $f = 15$ and $g = -4$

....

(Total for Question 2 is 2 marks)

3

(a) Work out the size of the angle marked x.

.... °

(b) Give a reason for your answer.

....

....

(Total for Question 3 is 2 marks)

4   A shop sells washing powder in 2.6 kg packs.

Jacob has no washing powder.
He estimates that he does 2 washes a week, using 80g each wash.

Jacob wants to buy enough washing powder for 52 weeks.

How many packs of washing powder does Jacob need to buy?

....

(Total for Question 4 is 3 marks)

5   Write 0.11 as a fraction.

....

(Total for Question 5 is 1 mark)

6   Write 0.9 as a percentage.

.... %

(Total for Question 6 is 1 mark)

7   (a) Find the value of $9.5^2 + 2.5^2$

....

(1)

(b) Find the value of $\sqrt{9.8 + 13.56} - 2.17$

....

(2)

(Total for Question 7 is 3 marks)

8   The diagram shows two shapes on a centimetre grid.
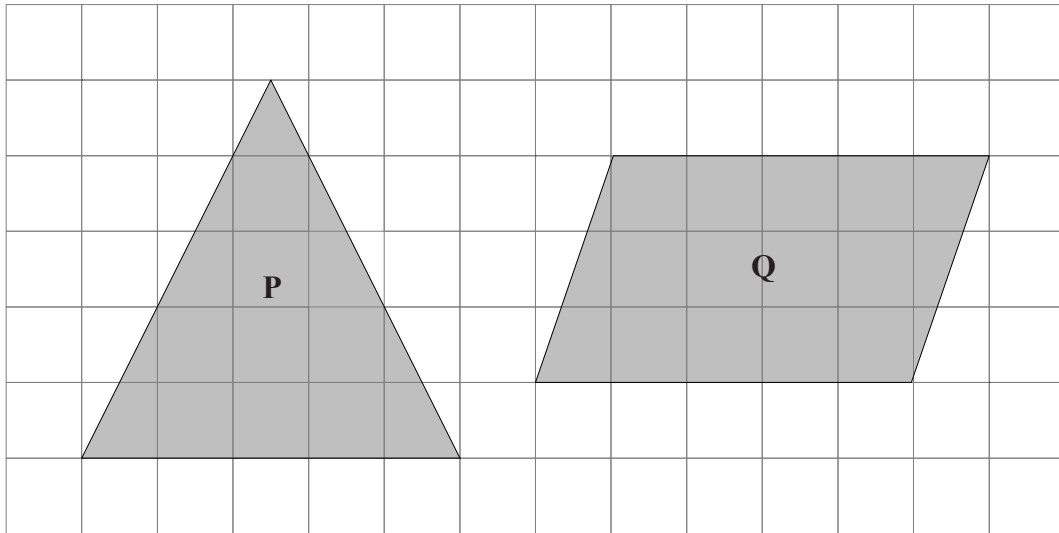
(a) Find the area of shape **P**

.... cm^2

(b) Write down the mathematical name for shape **Q**.

....

(c) Find the area of shape **Q**.

.... cm^2

(Total for Question 8 is 3 marks)

9 Here are the heights, in cm, of 18 people.

155   174   171   194   153   157   173   186   155

179   169   180   153   152   181   193   175   184

Draw an ordered stem and leaf diagram to show this information.
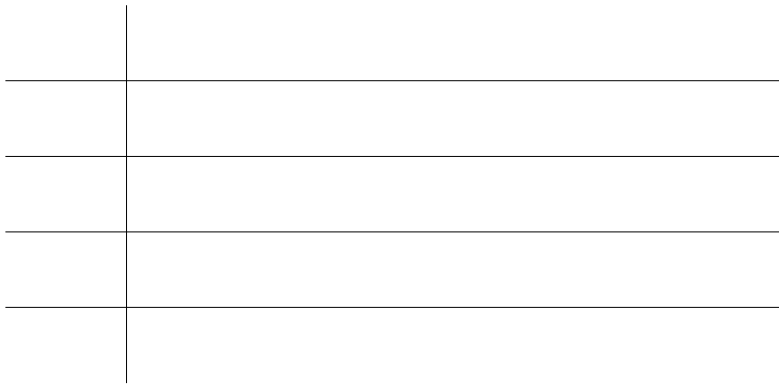
Key: 15 | 2 = 156 cm

(Total for Question 9 is 2 marks)

10 Here is a list of seven numbers.
One of the numbers is hidden.

| 7 | 8 | 11 | 13 | 9 | 15 | ? |

The mean of the numbers is 12.

Find the value of the hidden number.
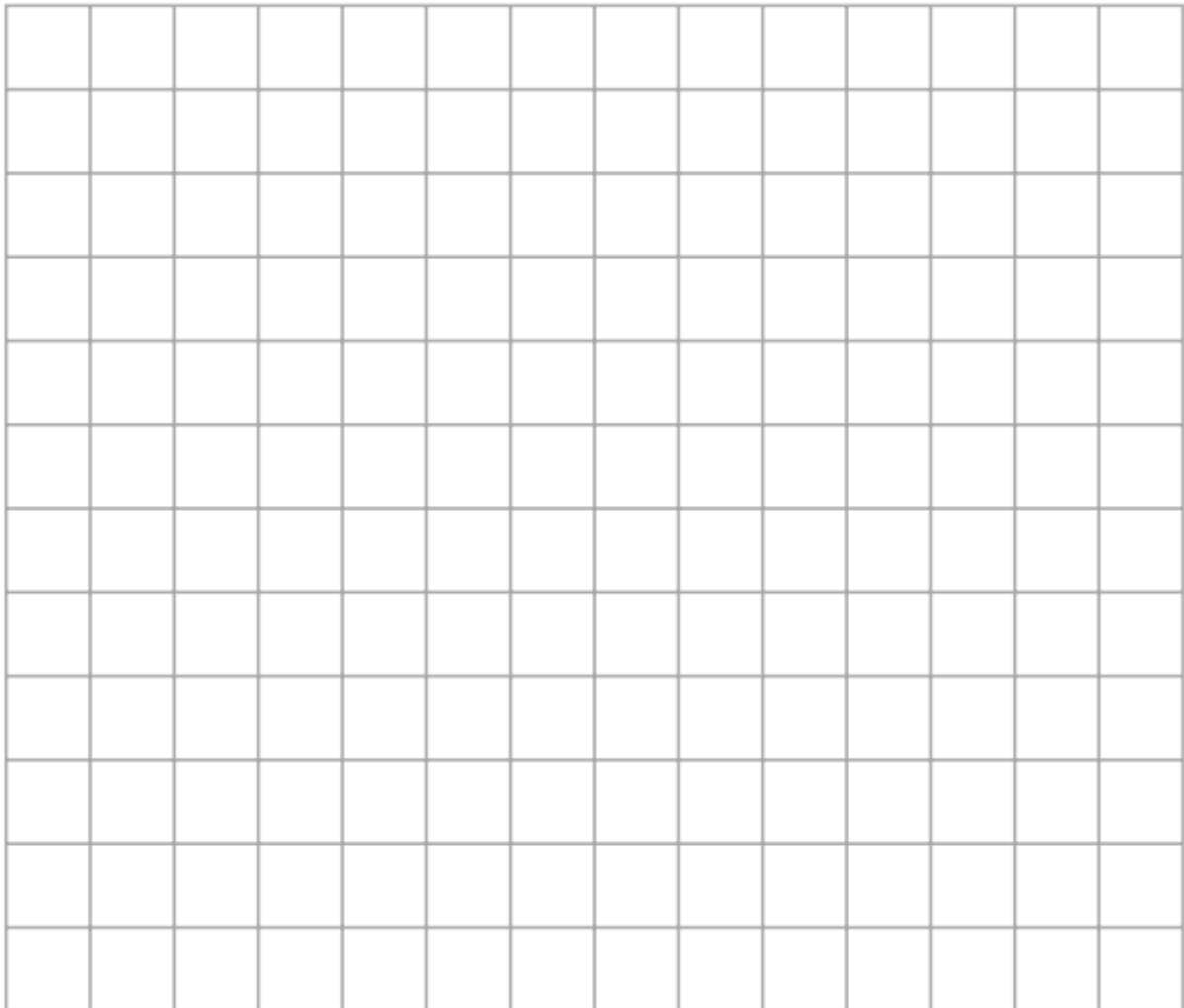
…..........................

(Total for Question 10 is 2 marks)

11   20 students in each of year 7 and year 8 were asked how about their favourite biscuits.

The table gives information about the results.

	Digestive	Custard Cream	Shortbread
Year 7	5	7	8
Year 8	3	8	9

Draw a suitable bar chart for this information.