

**FOUNDATION TIER
MINI PRACTICE EXAM 12**



**NON-CALCULATOR
20 MINUTES ALLOWED**

1.
The stem and leaf diagram below shows the heights (in centimetres) of a group of 15 students.

Key: 13 | 6 = 136 centimetres

13		6 9
14		2 2 4 5 6 8
15		0 4 5 6 8 9
16		1

- (a) What is the range? (1)
- (b) What is the median? (1)
- (c) What is the mode? (1)
- (d) Another student, who is 135 centimetres tall, is added to the group.
Does this change any of the answers to parts (a), (b) and (c)? (3)

2.
(a) Factorise $x^2 + 7x + 10$

(b) Solve $x^2 - 3x - 18 = 0$

(3)

(2)

(3)

3.

Kirsty has a five-sided spinner, with sections labelled A, B, C, D and E.

She spun the spinner 50 times.

Her results are summarised in the table below.

Section	A	B	C	D	E
Number of results	12		9	11	11
Relative frequency					

(a) Complete the table.

(2)

(b) Kirsty says “Because more of my 50 spins landed on A than C, the section labelled A must be larger than the section labelled C”.

Is Kirsty correct? Explain your answer.

(1)

(c) Do you think Kirsty’s spinner is a fair spinner? Explain your answer.

(1)

4.

(a) Fully simplify the ratio 44 : 20 : 12.

(1)

(b) Express the ratio 9 : 1.5 in the ratio $n : 1$, where n is an integer.

(1)

5.

Find the equation of the line that passes through the points (1, 1) and (4, 13).

(4)