

Name: \_\_\_\_\_

**ASM Tuition Academy**  
**STEM AND LEAF**

**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 you're working out**.

**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 time.
- Try to answer every question.
- Check your answers if you have time at the end.

Q1. Here are the heights, in cm, of 25 plants.

27, 29, 32, 33, 34,  
36, 38, 39, 41, 44,  
46, 47, 48, 52, 55,  
31, 37, 42, 45, 49,  
53, 56, 28, 35, 40

Draw an ordered stem and leaf diagram to show this information. You must include a key.

**(Total for question 1 is 3 marks)**

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Q2. Here are the times, in seconds, it took 10 people to run a race.

54, 65, 68, 49, 72, 56, 62, 60, 53, 70

**(Total for question 2 is 3 marks)**

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Q3. Here is a stem and leaf diagram showing the mass, in kilograms, of some grapes.

12		7	8	9	5	
13		1	3	4	5	6
14		1	1	0	2	3
15		0	4	6		

Key: 127 = 127 kilograms

Work out the median mass.

**(Total for question 3 is 2 marks)**

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Q4. Here are the heights, in cm, of 25 people.

153, 154, 158, 159, 160,  
162, 165, 166, 167, 168,  
170, 172, 174, 177, 179,  
180, 181, 183, 184, 185,  
186, 187, 189, 190, 190

Draw an ordered stem and leaf diagram to show this information. You must include a key.

**(Total for question 4 is 3 marks)**

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Q5. Here are scores of 18 students in a test.

82, 95, 71, 76, 61, 89,  
84, 73, 68, 79, 65, 92,  
74, 69, 66, 81, 77, 72

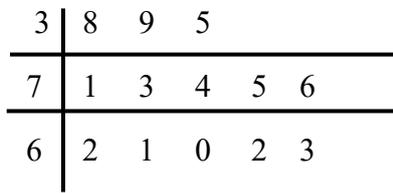
(a) Draw an ordered stem-and-leaf diagram to show this information.  
You must include a key.

(b) A student is selected at random. Work out the probability that this student scored more than 85.

**(Total for question 5 is 5 marks)**

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Q6. Here is a stem and leaf diagram showing the ages of some politicians.



Key: 3 | 8 = years

- a) Work out the range.
- (b) Work out the median age.

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**(Total for question 6 is 3 marks)**

Q7. Here are the masses, in kg, of 20 objects.

1.3, 2.1, 2.5, 3.0, 3.6,  
1.7, 2.2, 2.8, 3.1, 3.9,  
4.2, 1.5, 2.4, 3.3, 2.7,  
4.0, 1.8, 3.5, 2.6, 3.7

- (a) Draw an ordered stem and leaf diagram to show this information.
- (b) Work out the median mass.

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**(Total for question 7 is 5 marks)**

Q8. Here are the speeds, in mph, of 30 cars.

46, 59, 61, 55, 72, 68,  
49, 63, 57, 74, 52, 65,  
71, 54, 69, 47, 66, 62,  
50, 60, 73, 64, 58, 67,  
53, 70, 48, 56, 75, 55

- (a) Draw an ordered stem and leaf diagram to show this information. You must include a key.  
(b) Work out the median speed.

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**(Total for question 8 is 5 marks)**

Q9. Here are the ages of a company's employees.

22, 34, 47, 53, 28, 41, 39  
55, 50, 36, 21, 27, 32, 29  
44, 38, 26, 25, 58, 31, 42

- (a) Draw an ordered stem-and-leaf diagram to show this information.  
You must include a key.  
(b) One of the teachers is selected at random.  
Find the probability that they are older than 40.

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**(Total for question 9 is 5 marks)**

Q10. Here are scores of some students in a test.

47 56 61 72 85  
49 63 58 71 92  
54 67 46 53 78  
69 64 57 81 48

- (a) Draw an ordered stem and leaf diagram to show this information. You must include a key.
- (b) Work out the median score. Another student sits the test and scores 80. Boris says: "This means the median will increase."
- (c) Is Boris correct? You must explain your answer.

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**(Total for question 10 is 6 marks)**