1. 15 students took a maths test. Construct a stem leaf diagram to represent their scores:

| 43 | 37 | 59 | 45 | 56 |
| :--- | :--- | :--- | :--- | :--- |
| 62 | 45 | 65 | 51 | 50 |
| 32 | 58 | 45 | 62 | 43 |

From your diagram find:
a. The modal score
b. The median score
c. The range
2. 20 adults were weighed with the their weights recorded in kg . Represent their weights on a stem leaf diagram:

| 83 | 77 | 69 | 65 | 76 |
| :--- | :--- | :--- | :--- | :--- |
| 61 | 72 | 65 | 65 | 80 |
| 95 | 82 | 75 | 62 | 73 |
| 91 | 88 | 82 | 66 | 65 |

From your diagram find:
a. The modal weight
b. The median weight
c. The range
3. 18 adults were measured with the their heights recorded in cm . Represent their heights on a stem leaf diagram:

| 183 | 157 | 169 | 156 | 176 |
| :---: | :---: | :---: | :---: | :---: |
| 181 | 176 | 165 | 169 | 180 |
| 175 | 182 | 175 | 152 | 177 |
| 181 | 174 | 176 |  |  |

From your diagram find:
d. The modal height
e. The median height
f. The range

STEM LEAF DIAGRAMS
1)

$$
\left.\left.\begin{array}{llllll}
43 & 37 & 59 & 45 & 56 \\
62 & 45 & 65 & 51 & 50 \\
32 & 58 & 45 & 62 & 43
\end{array}\right] \begin{array}{llll} 
\\
3 & 7 & 2 \\
4 & 3 & 5 & 55
\end{array}\right]
$$

Median 15 items $15+1=16 \quad 16 \div 2=8 \Rightarrow 8^{t h}$ item

$$
\text { Median }=50
$$

$$
\begin{aligned}
\text { Range } & =\text { Highest }- \text { Lowest } \\
& =65-32 \\
& =33
\end{aligned}
$$

STEM LEAF DIAGRAMS
EXERCISE
2) Weights in Kg
$\begin{array}{lllll}83 & 77 & 69 & 65 & 76\end{array}$
$\begin{array}{lllll}61 & 72 & 65 & 65 & 80\end{array}$
$\begin{array}{lllll}95 & 82 & 75 & 62 & 73\end{array}$
$\begin{array}{lllll}91 & 88 & 82 & 66 & 65\end{array}$

$$
\begin{aligned}
& \left.\begin{array}{l|lllllll}
6 & 9 & 5 & 1 & 5 & 5 & 2 & 6
\end{array}\right) \\
& \begin{array}{l|l}
6 & 12555569 \\
7 & 2(3567 \\
8 & 02238 \\
9 & 15
\end{array} \quad \text { key } \quad 7 / 3=73 \mathrm{~kg}
\end{aligned}
$$

Mode $=65 \mathrm{~kg}$ (occurs 4 times)
Median 20 items $20+1=21 \quad 21 \div 2=10.5$ item 10.5

$$
\begin{aligned}
& \text { Median }=74 \mathrm{~kg} \\
\text { Range }= & \text { Highest - Lowest } \\
= & 95-61 \\
= & 34 \mathrm{~kg}
\end{aligned}
$$

1) 

$$
\begin{aligned}
& 43 \quad 37 \quad 59 \quad 45 \quad 56 \\
& \begin{array}{lllll}
62 & 45 & 65 & 51 & 50
\end{array} \\
& \begin{array}{lllll}
32 & 58 & 45 & 62 & 43
\end{array} \\
& \begin{array}{l|lllll}
3 & 7 & 2 & & \\
4 & 3 & 5 & 5 & 5 & 3 \\
5 & 9 & 6 & 1 & 0 & 8 \\
6 & 2 & 5 & 2
\end{array} \\
& \begin{array}{l|llll}
3 & 2 & 7 & \\
4 & 3 & 3 & 5 & 5 \\
5 & 5 \\
5 & 0 & 1 & 6 & 8 \\
6 & 2 & 2 & 5
\end{array} \\
& \text { Key } 418=48 \\
& \text { Mode }=45
\end{aligned}
$$

Median 15 items $15+1=16 \quad 16 \div 2=8 \Rightarrow 8^{\text {th }}$ item

$$
\text { Median }=50
$$

$$
\begin{aligned}
\text { Range } & =\text { Highest }- \text { Lowest } \\
& =65-32 \\
& =33
\end{aligned}
$$

