National 5 Homework : 1 year course Statistics

1. Here is a table of exam results for ten pupils:-


| Maths results | $20 \%$ | $35 \%$ | $60 \%$ | $90 \%$ | $45 \%$ | $70 \%$ | $85 \%$ | $10 \%$ | $65 \%$ | $30 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Physics results | $35 \%$ | $30 \%$ | $55 \%$ | $95 \%$ | $40 \%$ | $75 \%$ | $80 \%$ | $20 \%$ | $50 \%$ | $35 \%$ |

(a) Display these results on a scatter graph.
(b) Describe the correlation of the graph.
(c) Draw a line of best fit.
(d) Find the equation of the line of best fit.
(d) Use the equation to calculate what the maths result would be for someone who scored $50 \%$ in maths
2. Write down the quartiles for this set of data.

## $2,3.5,5,8,12,15,21,22,25,32,32,35,37$

3. Find the semi-interquartile range for this list of data.
$12,4,15,6,9,10,13,8,6,7,5,7,11$
4. (a) The pulse rates, in beats per minute, of 6 adults in a hospital waiting area are:-

| 68 | 73 | 86 | 72 | 82 | 78 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Calculate the mean and standard deviation of this data.
(b) 6 children in the same waiting area have a mean pulse rate of 89.6 beats per minutes and a standard deviation of 5.4.


Make two valid comparisons between the children's pulse rates and those of the adults.

