

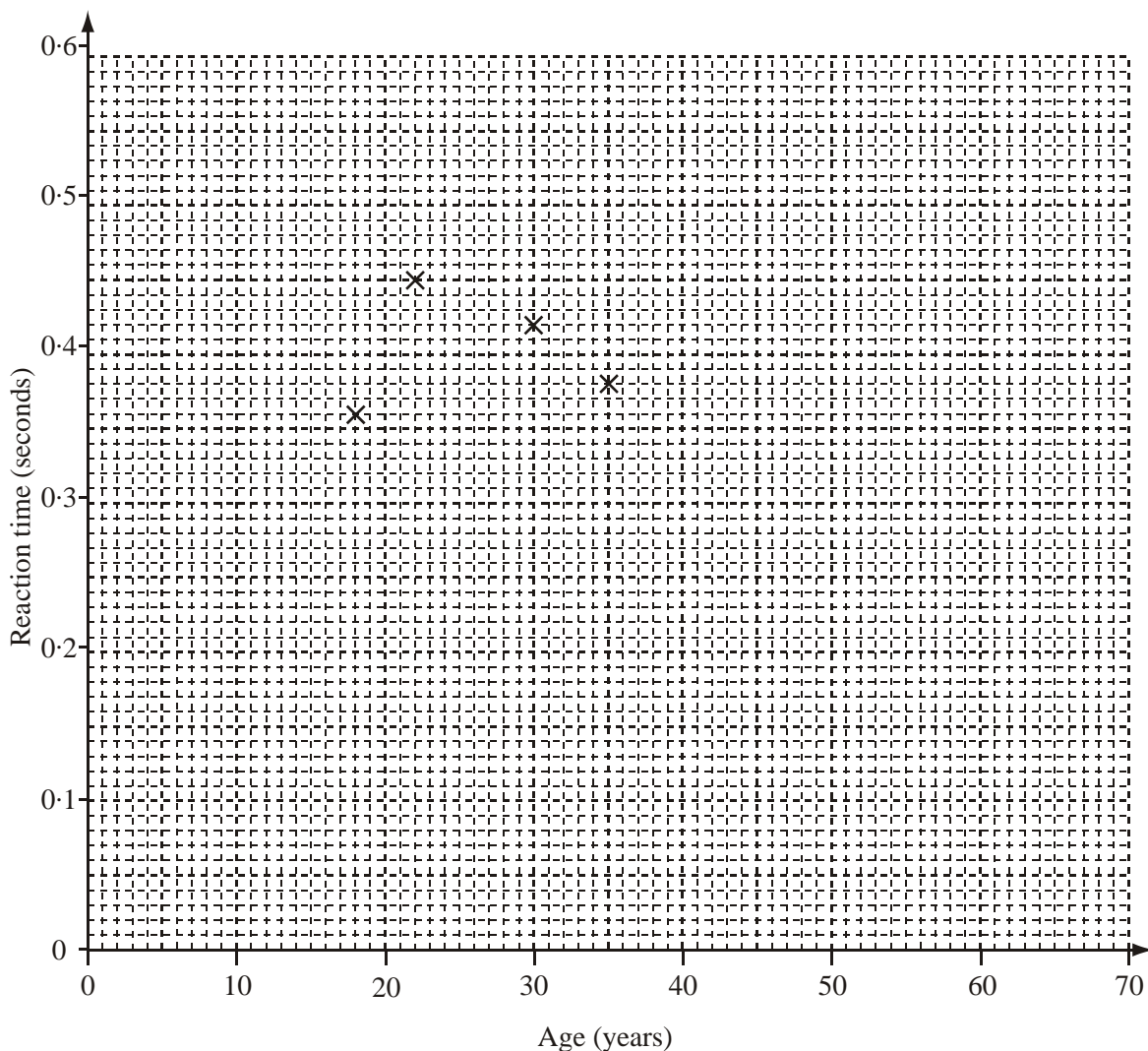


## THE WESTMINSTER SCHOOL, DUBAI SCATTER GRAPHS-YR 11

1.A student is investigating the relationship between a person's age and their reaction time. The table shows his results.

Age (years)	35	18	30	22	58	45	47	62	42	54
Reaction Time (seconds)	0.38	0.36	0.42	0.45	0.56	0.43	0.52	0.55	0.52	0.48

- (a) On the grid below complete the scatter diagram.  
The first four points have been plotted.



[2]

- (b) Describe the correlation shown by the graph.

.....[1]

- (c) Draw a line of best fit and use it to estimate the reaction time of a person aged 40.

..... s

[2]

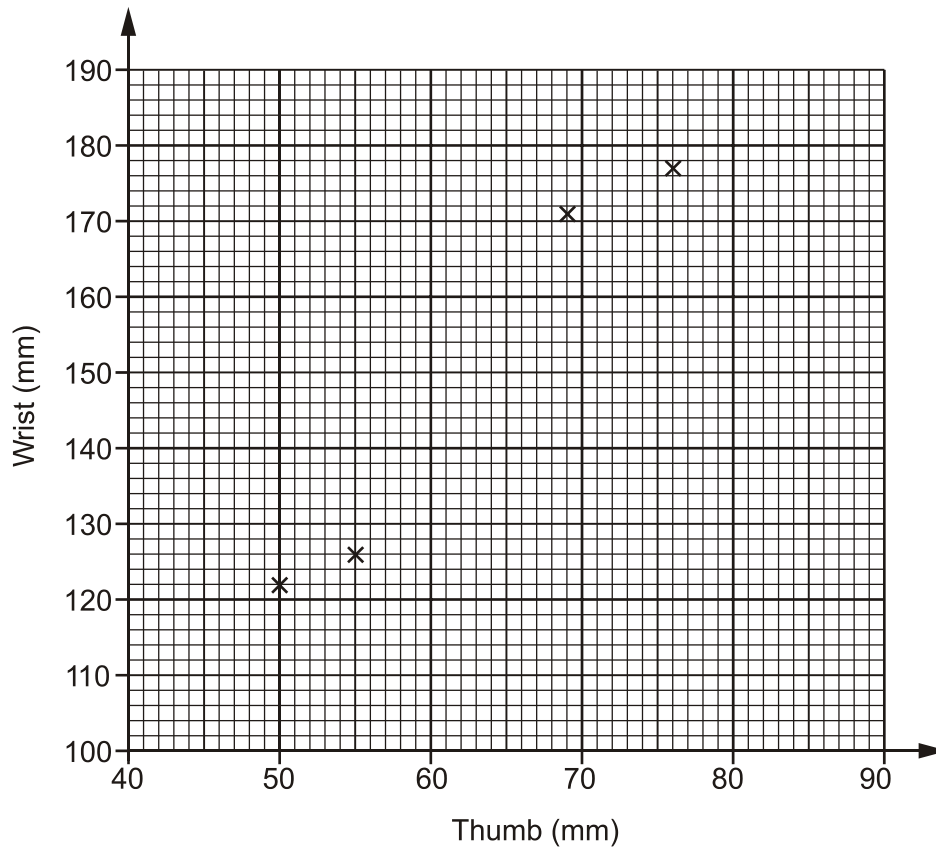


## THE WESTMINSTER SCHOOL, DUBAI SCATTER GRAPHS-YR 11

2. The table shows the measurements in millimetres around the thumbs and the wrists of 10 people.

Thumb (mm)	69	76	50	55	75	80	66	53	60	62
Wrist (mm)	171	177	122	126	165	168	158	132	135	149

- (a) Complete the scatter diagram below.  
The first four points have been plotted for you.



[2]

- (b) What does the diagram show about the relationship between the thumb and wrist measurements?

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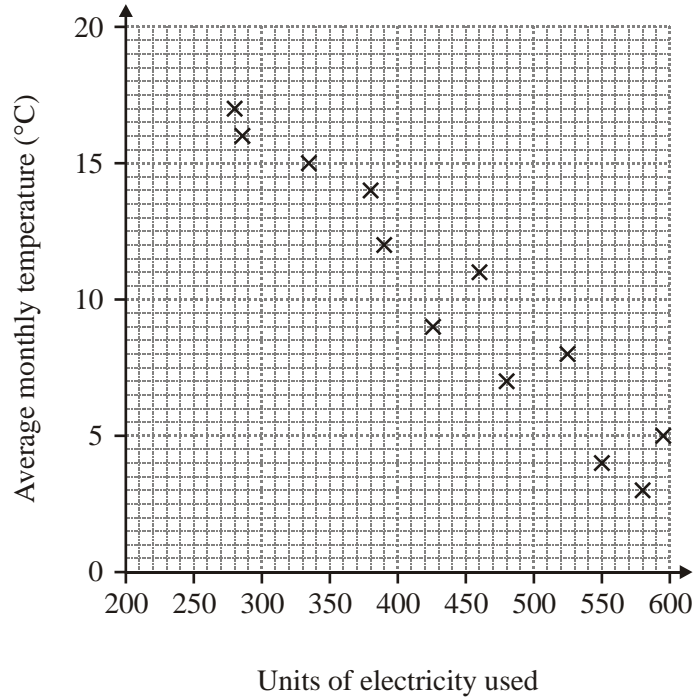
[1]



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## SCATTER GRAPHS-YR 11

3. This scatter diagram shows the number of units of electricity used by a household in a month and the average monthly temperature ( $^{\circ}\text{C}$ ).



- (a) Describe the correlation shown.

.....

[1]

- (b) (i) Draw a line of best fit on the scatter diagram.

[1]

- (ii) In another month the average temperature was  $6^{\circ}\text{C}$ .

Use your line of best fit to estimate the number of units of electricity used.

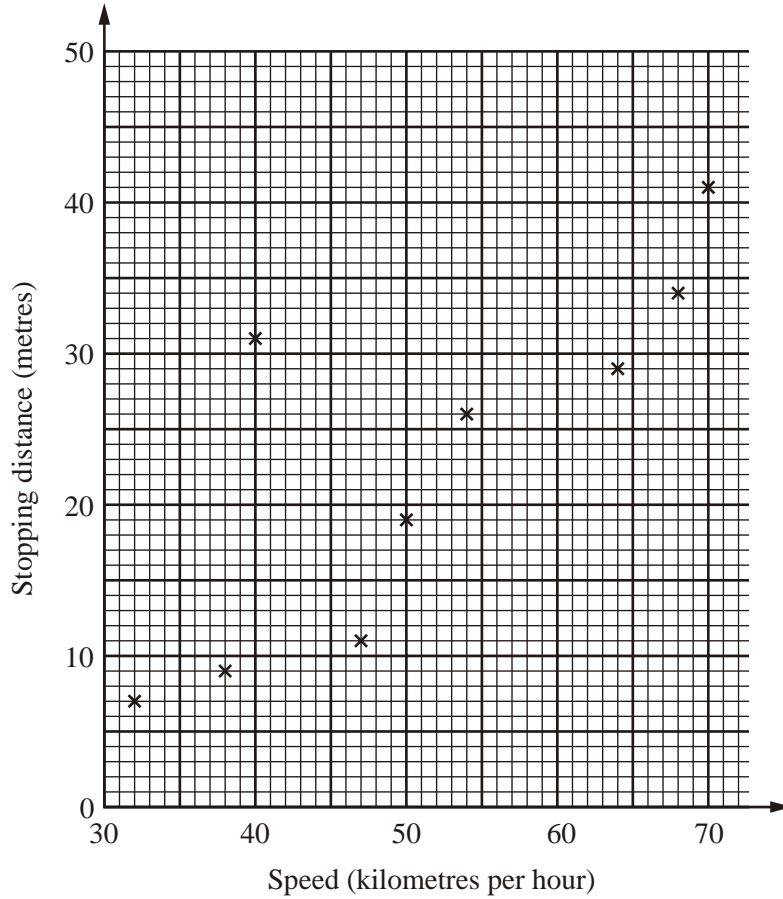
..... units

[1]



## THE WESTMINSTER SCHOOL, DUBAI SCATTER GRAPHS-YR 11

4. A manufacturer tests the stopping distance of a car travelling at different speeds. The results are shown in the scatter diagram below.



- (a) One test was on a wet road.

On the diagram, **circle** the point for this test.

[1]

- (b) Describe the correlation shown in this diagram.

.....

[1]

- (c) Draw a line of best fit.

[1]

- (d) Use your line to estimate the stopping distance when travelling at 60 kilometres per hour.

..... m[1]



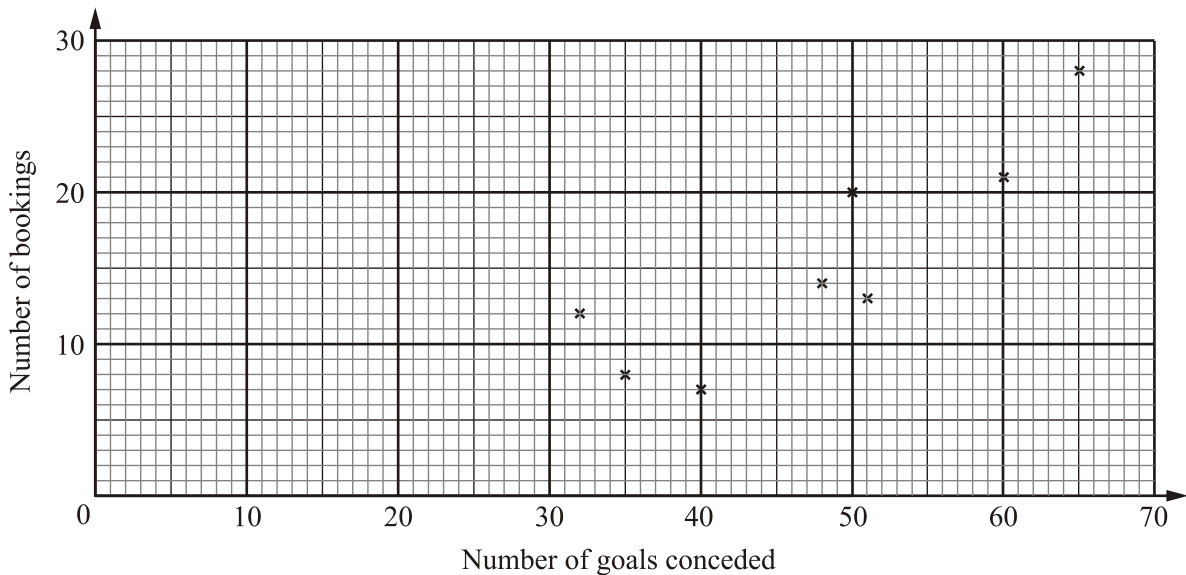
## THE WESTMINSTER SCHOOL, DUBAI SCATTER GRAPHS-YR 11

5. This table shows the number of goals conceded and the number of bookings for teams in a local football league.

Team	A	B	C	D	E	F	G	H	I	J	K
Number of goals conceded	40	51	32	65	60	48	50	35	41	43	62
Number of bookings	7	13	12	28	21	14	20	8	14	13	24

- (a) The information for the first eight teams is plotted on the scatter diagram below.

Complete the diagram for teams I, J and K.



[1]

- (b) Describe the correlation.

.....

[1]

- (c) (i) Draw a line of best fit on your diagram.

[1]

- (ii) Team L conceded 54 goals.

Use your line to estimate how many bookings team L received.

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[1]



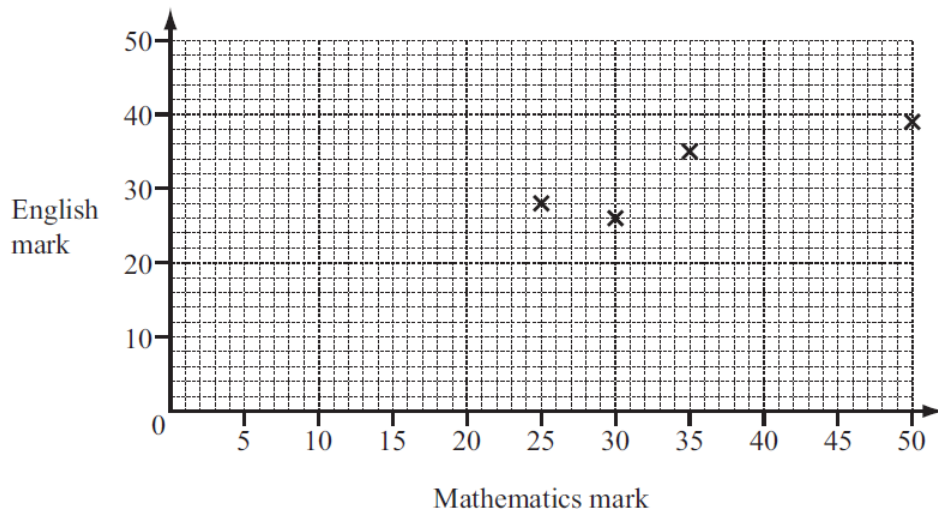
## THE WESTMINSTER SCHOOL, DUBAI SCATTER GRAPHS-YR 11

1

Mathematics mark	30	50	35	25	5	39	48	40	10	15
English mark	26	39	35	28	9	37	45	33	16	12

The table shows the test marks in Mathematics and English for 10 students.

- (a) (i) On the grid, complete the scatter diagram to show the Mathematics and English marks for the 10 students. The first four points have been plotted for you.



- (ii) What type of correlation does your scatter diagram show? [2]

*Answer(a)(ii)* .....

- (iii) Draw a line of best fit on the grid. [1]

- (iv) Ann missed the English test but scored 22 marks in the Mathematics test. Use your line of best fit to estimate a possible English mark for Ann.

*Answer(a)(iv)* .....

- (b) Show that the mean English mark for the 10 students is 28.

*Answer(b)*

[2]

- (c) Two new students do the English test. They both score the **same** mark. The mean English mark for the 12 students is 31. Calculate the English mark for the new students.

*Answer(c)* .....

[3]