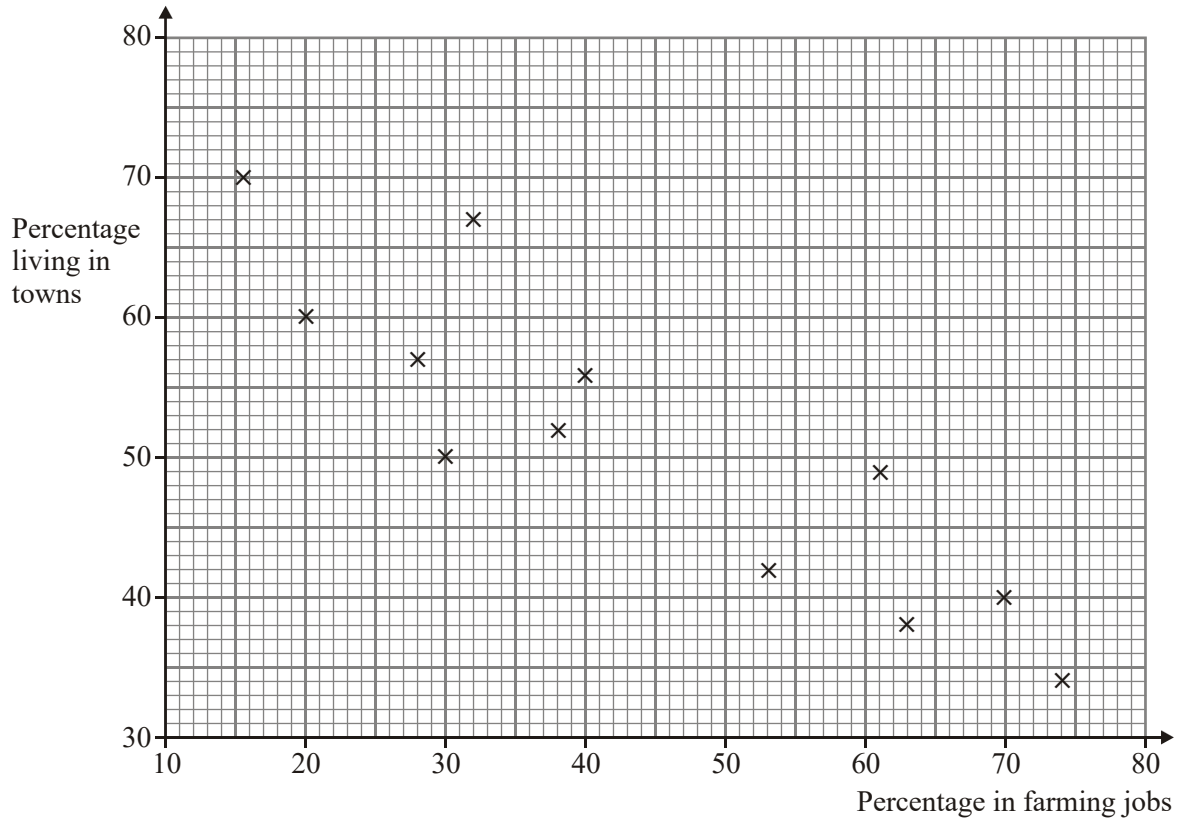


1. The scatter graph shows information about 12 countries.

For each country, it shows the percentage of the population in farming jobs and the percentage of the population living in towns.



- (a) Describe the relationship between the percentage of the population in farming jobs and the percentage of the population living in towns.

.....

.....

(1)

- (b) Draw the line of best fit on the scatter graph.

(1)

In Mathsland, the percentage of the population in farming jobs is 35%.

- (c) Use your line of best fit to estimate the percentage of Mathsland's population living in towns.

..... %

(1)

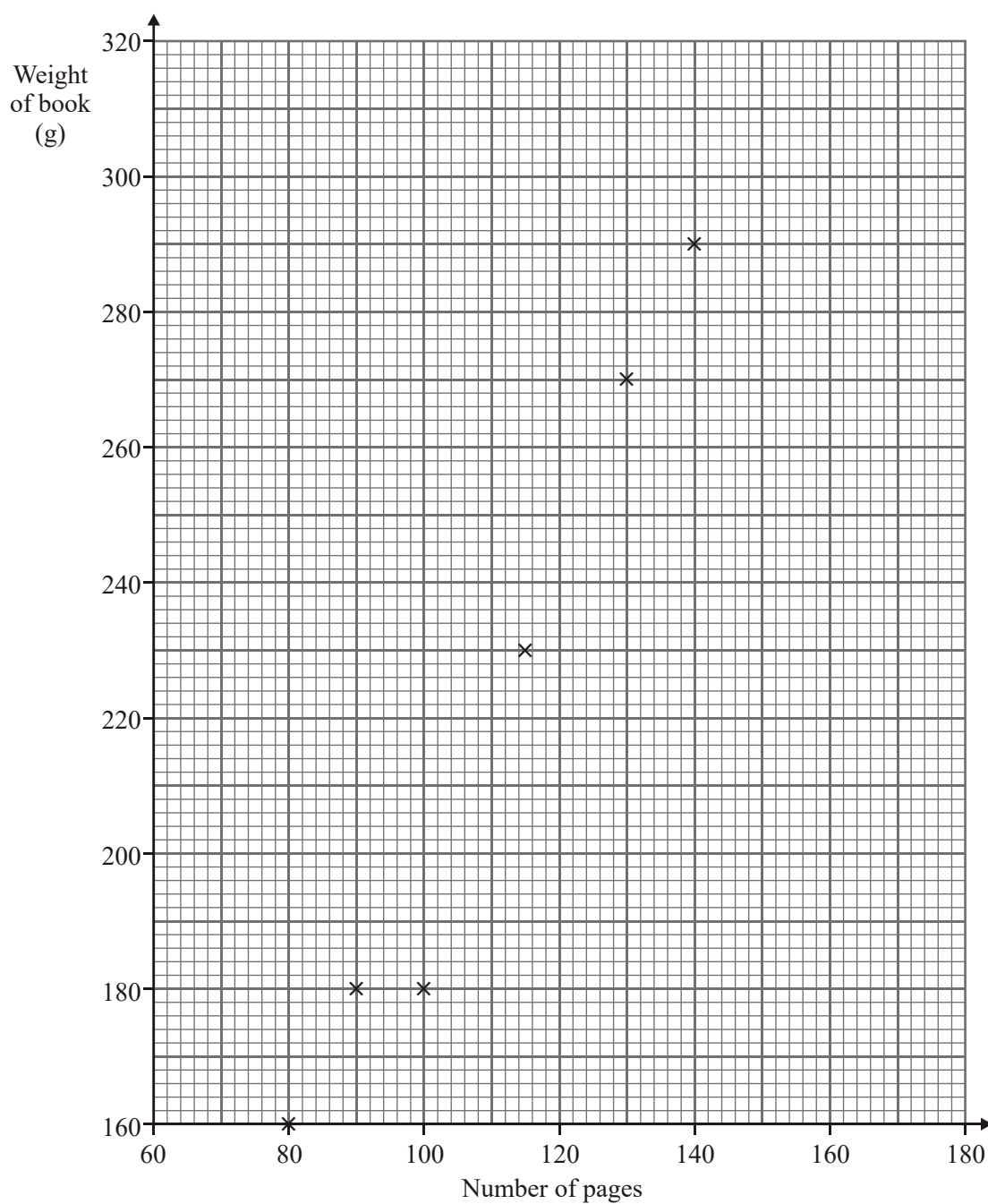
(Total 3 marks)

2. The table shows the number of pages and the weight, in grams, for each of 10 books.

Number of pages	80	130	100	140	115	90	160	140	105	150
Weight (g)	160	270	180	290	230	180	320	270	210	300

- (a) Complete the scatter graph to show the information in the table.
The first 6 points in the table have been plotted for you.

(1)



- (b) For these books, describe the relationship between the number of pages and the weight of a book.

.....

(1)

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

(1)

- (d) Use your line of best fit to estimate

- (i) the number of pages in a book of weight 280 g,

..... pages

- (ii) the weight of a book with 120 pages.

..... g

(2)

(Total 5 marks)

3. Pablo is an artist.

The scatter graph, below, gives information about the area and the cost of some of his pictures.

The table shows the area and the cost of another three of his pictures.

Area (cm ²)	2000	2900	3260
Cost (£)	1150	1250	1500

- (a) On the scatter graph, plot the information from the table.

(1)

- (b) Describe the relationship between the area of a picture and its cost.

.....

(1)

(c) Draw a line of best fit on the scatter graph. (1)

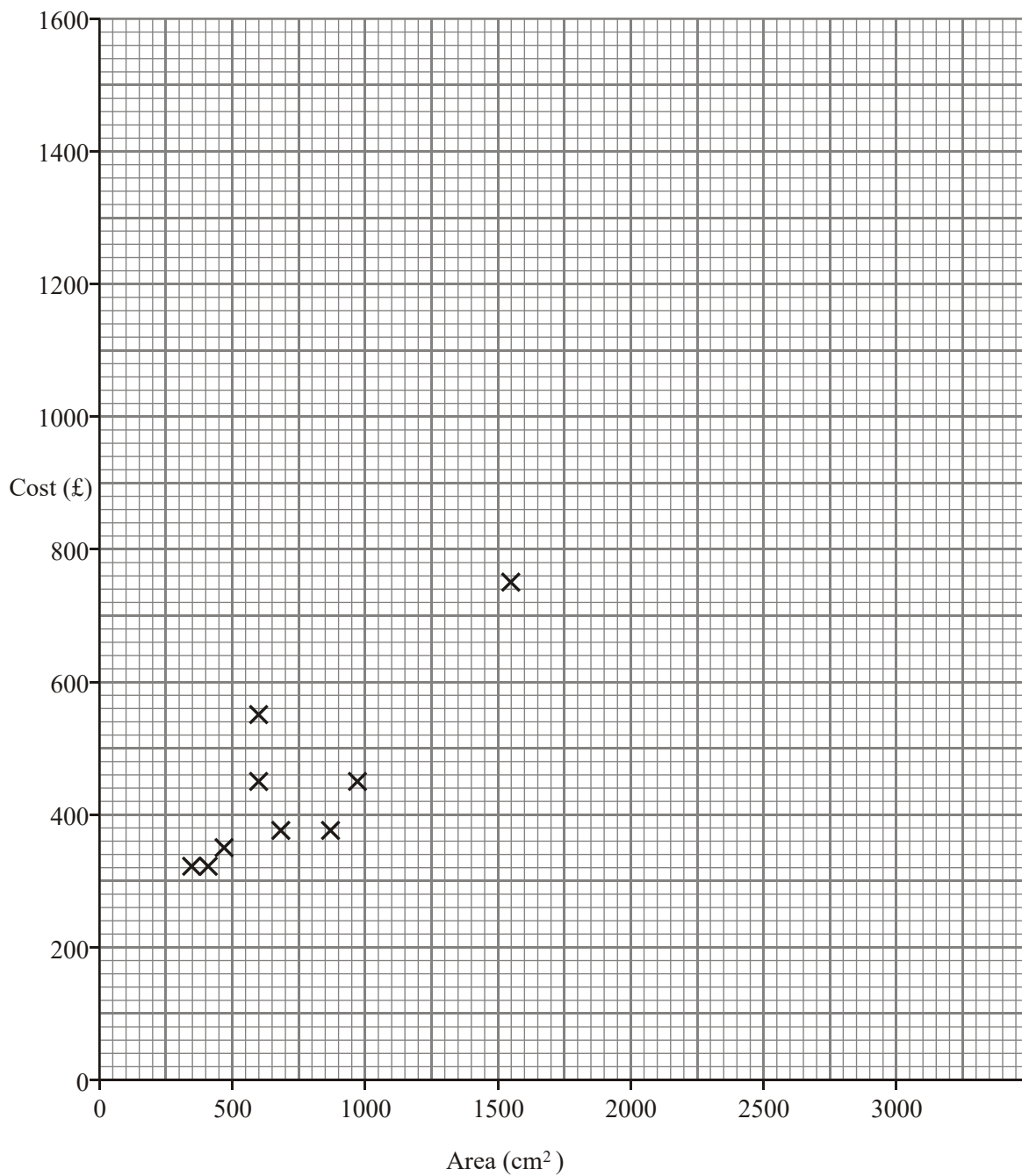
(d) Use your line of best fit to find an estimate of the cost of a picture with an area of 2500 cm^2 .

£..... (1)

All Pablo's pictures are rectangles.
 One of his pictures costs £1000.
 Its length is 48 cm.

(e) Use your line of best fit to find an estimate for the width of the picture.

..... cm (2)



(Total 6 marks)

4. Pablo is an artist.

The scatter graph, below, gives information about the area and the cost of some of his pictures.

The line of best fit has been drawn on the graph.

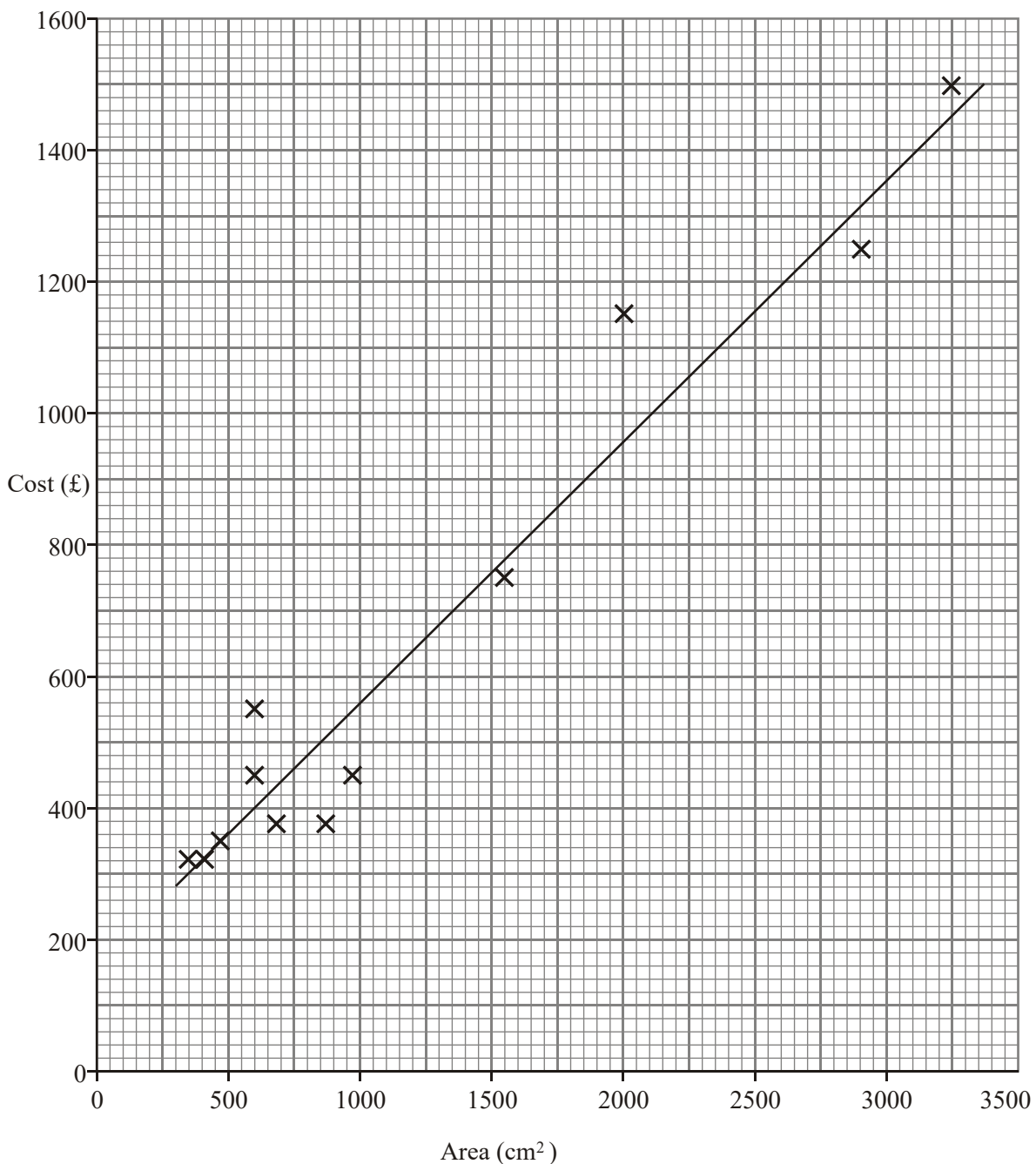
All Pablo's pictures are rectangles.

One of his pictures costs £1000.

Its length is 48 cm.

Use the line of best fit to estimate the width of the picture.

..... cm

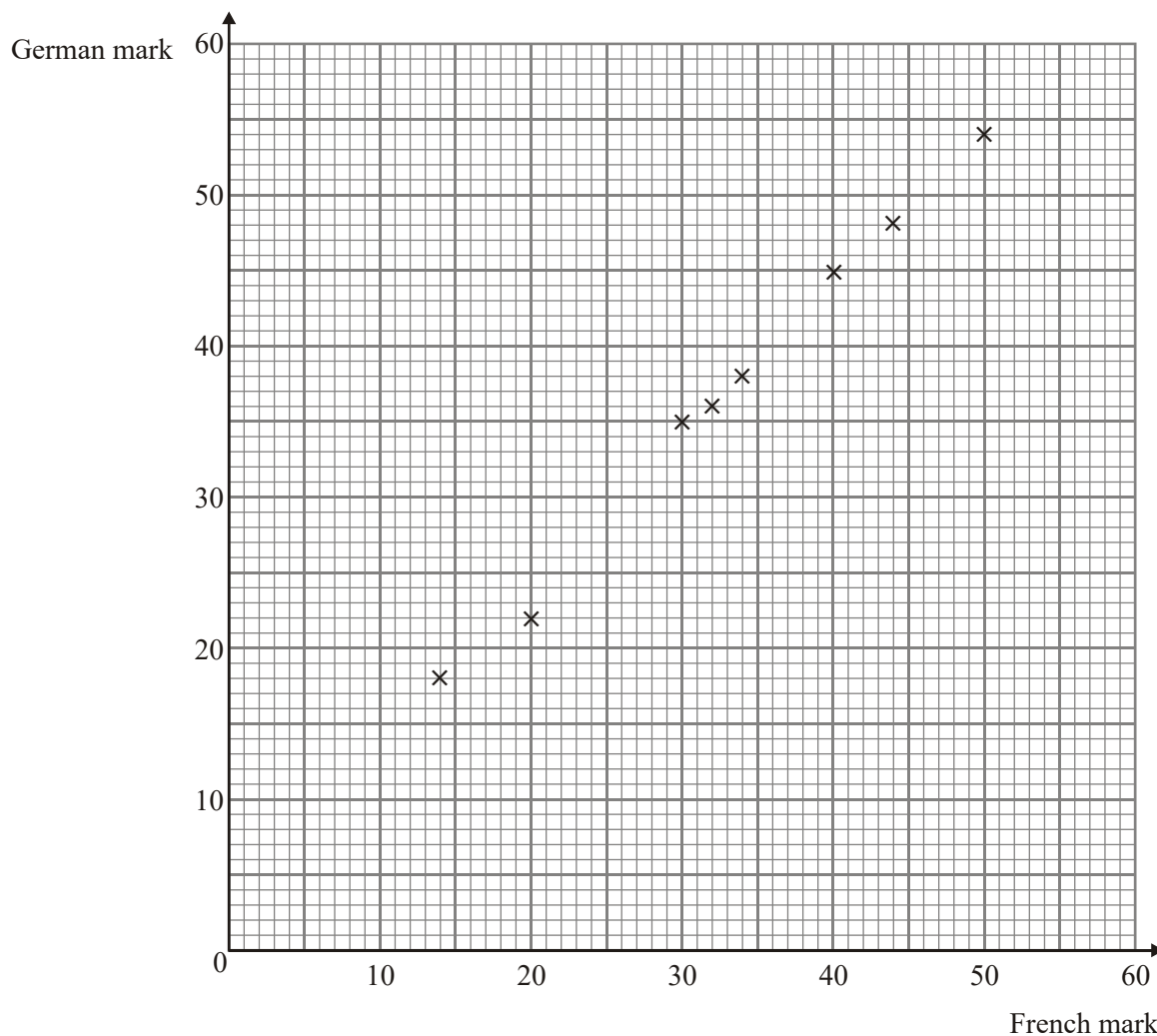


(Total 2 marks)

5. 10 students each took a French test and a German test. The table shows their marks.

French marks	44	30	40	50	14	20	32	34	20	45
German marks	48	35	45	54	18	22	36	38	25	50

- (a) Complete the scatter graph to show the information in the table.
The first 8 points in the table have been plotted for you.



(1)

- (b) What type of correlation does this scatter graph show?

.....

(1)

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

(1)

(d) Use your line of best fit to estimate

(i) the German mark for a student with a French mark of 26,

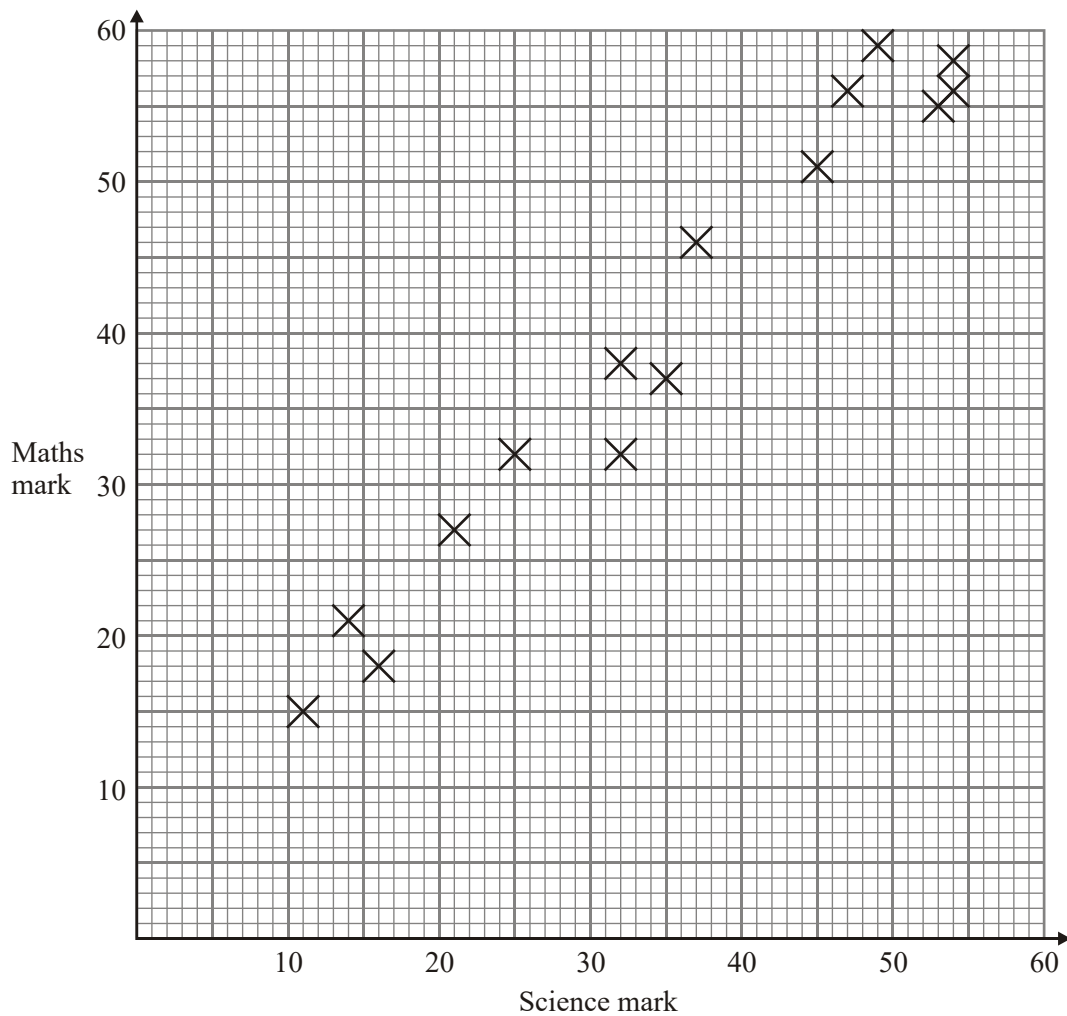
.....

(ii) the French mark for a student with a German mark of 43.

.....

(2)
(Total 5 marks)

6. The scatter graph shows the Science mark and the Maths mark for 15 students.



(a) What type of correlation does this scatter graph show?

.....

(1)

(b) Draw a line of best fit on the scatter graph.

(1)

Sophie's Science mark was 42.

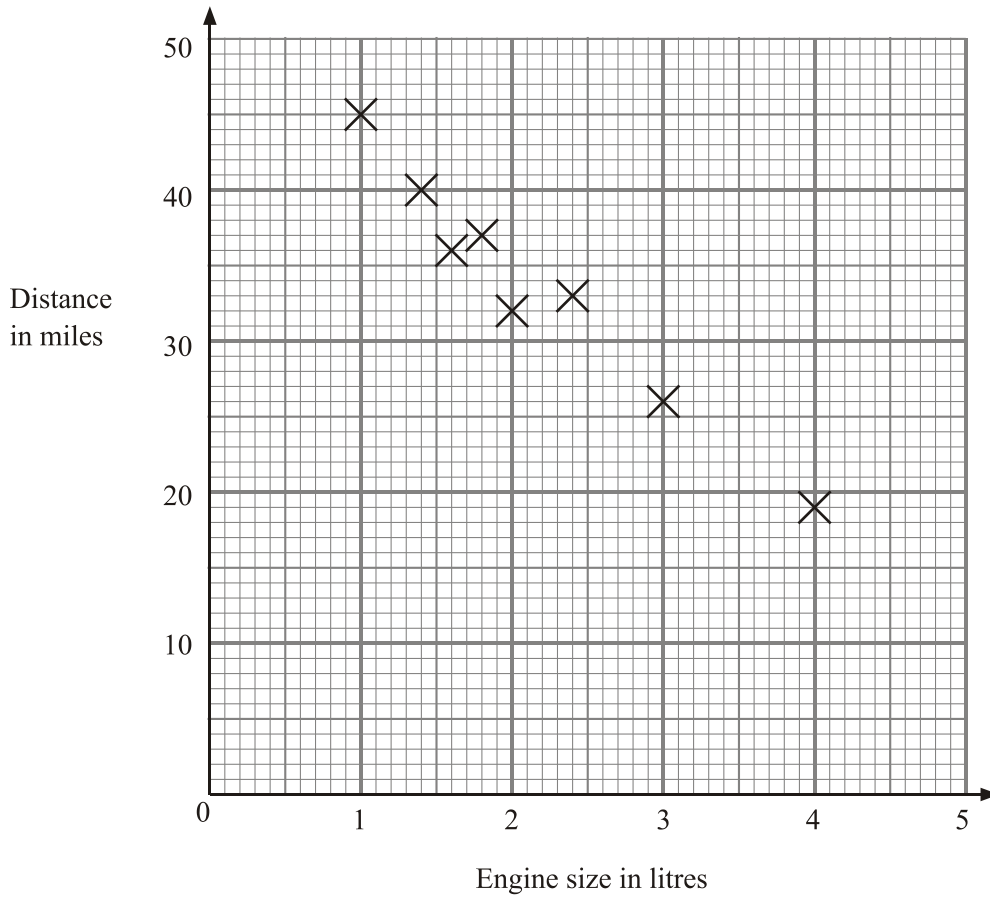
(c) Use your line of best fit to estimate Sophie's Maths mark.

.....

(1)

(Total 3 marks)

7. The scatter graph shows some information about 8 cars. For each car it shows the engine size, in litres, and the distance, in miles, it travels on one gallon of petrol.



- (a) What type of correlation does this scatter graph show?

.....

(1)

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

(1)

(c) Use your line of best fit to estimate

(i) the distance travelled on one gallon of petrol by a car with an engine size of 3.5 litres,

..... miles

(ii) the engine size of a car that travels a distance of 28 miles on one gallon of petrol.

..... litres

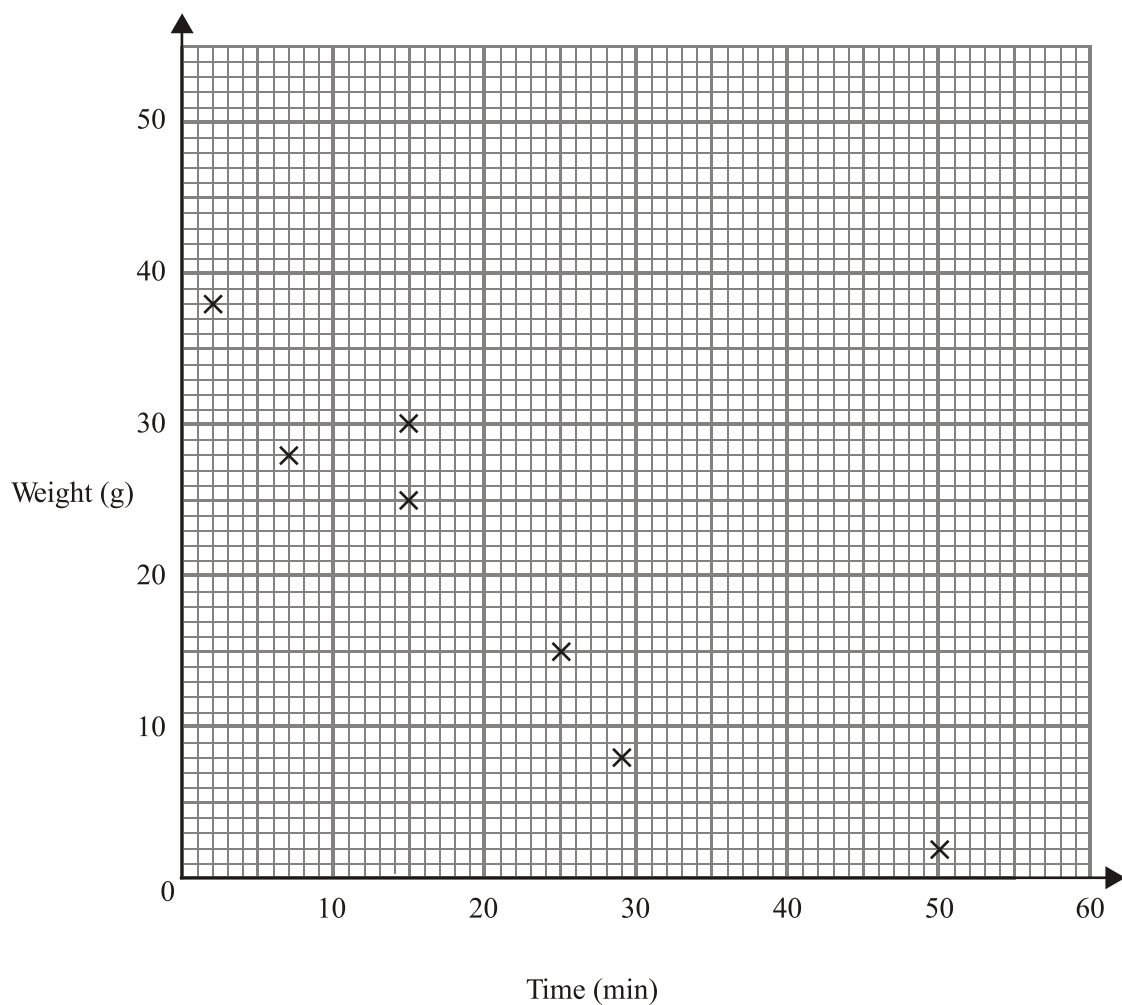
(2)

(Total 4 marks)

8. Identical candles were lit.
 The table shows, for ten of these candles, the number of minutes each candle burnt before it went out and the weight left of each candle when it went out.

Time (min)	29	15	25	50	2	15	7	30	35	35
Weight (g)	8	25	15	2	38	30	28	20	15	12

- (a) Complete the scatter graph. The first 7 points have been plotted for you.



(1)

- (b) Describe the **correlation** between the time and the weight.

.....

(1)

(c) Draw a line of best fit on the scatter graph.

(1)

A candle burnt for 20 minutes.

(d) (i) Use your line of best fit to estimate the weight of this candle when it went out.

..... g

Another candle had a weight of 10 g when it went out.

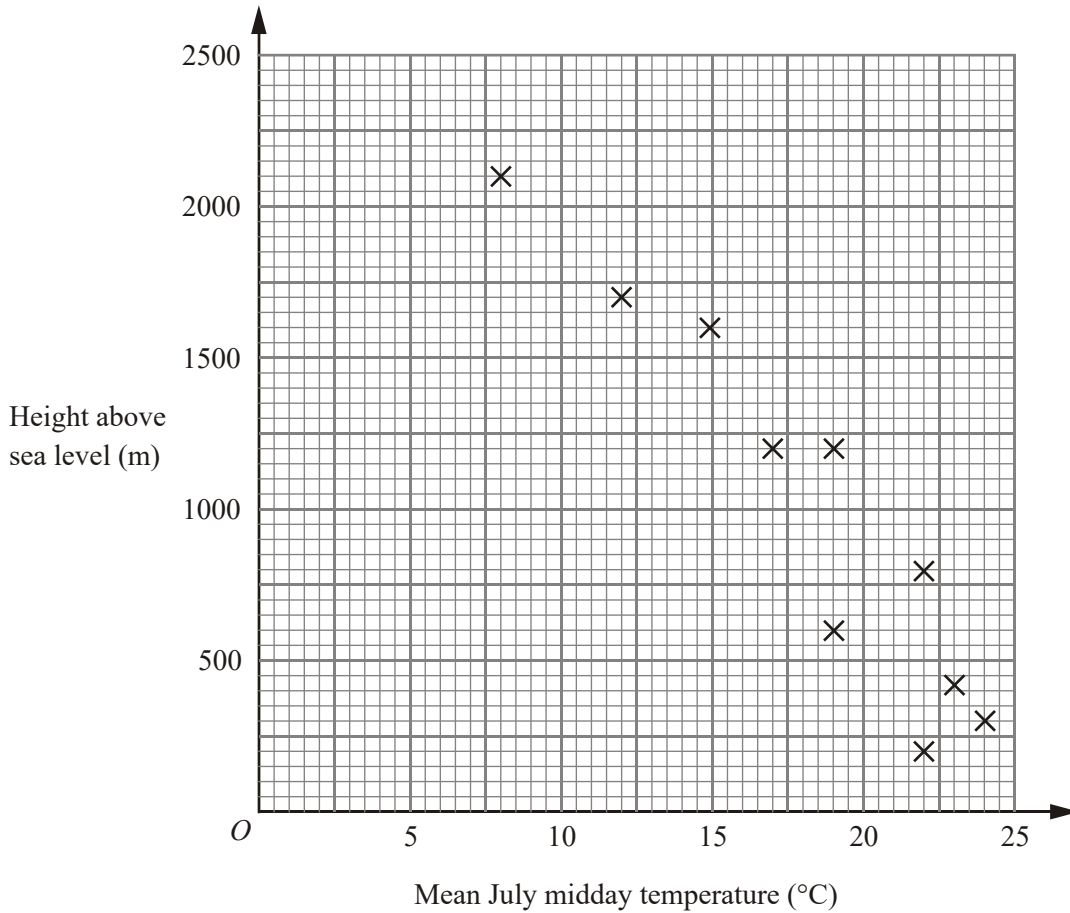
(ii) Use your line of best fit to estimate the number of minutes this candle burnt before it went out.

..... min

(2)

(Total 5 marks)

9. The scatter graph shows information for some weather stations. It shows the height of each weather station above sea level (m) and the mean July midday temperature ($^{\circ}\text{C}$) for that weather station.



The table shows this information for two more weather stations.

Height of weather station above sea level (m)	1000	500
Mean July midday temperature ($^{\circ}\text{C}$)	20	22

- (a) Plot this information on the scatter graph. (1)
- (b) What type of correlation does this scatter graph show?
 (1)

(c) Draw a line of best fit on the scatter graph.

(1)

A weather station is 1800 metres above sea level.

(d) Estimate the mean July midday temperature for this weather station.

..... °C

(1)

At another weather station the mean July midday temperature is 18°C.

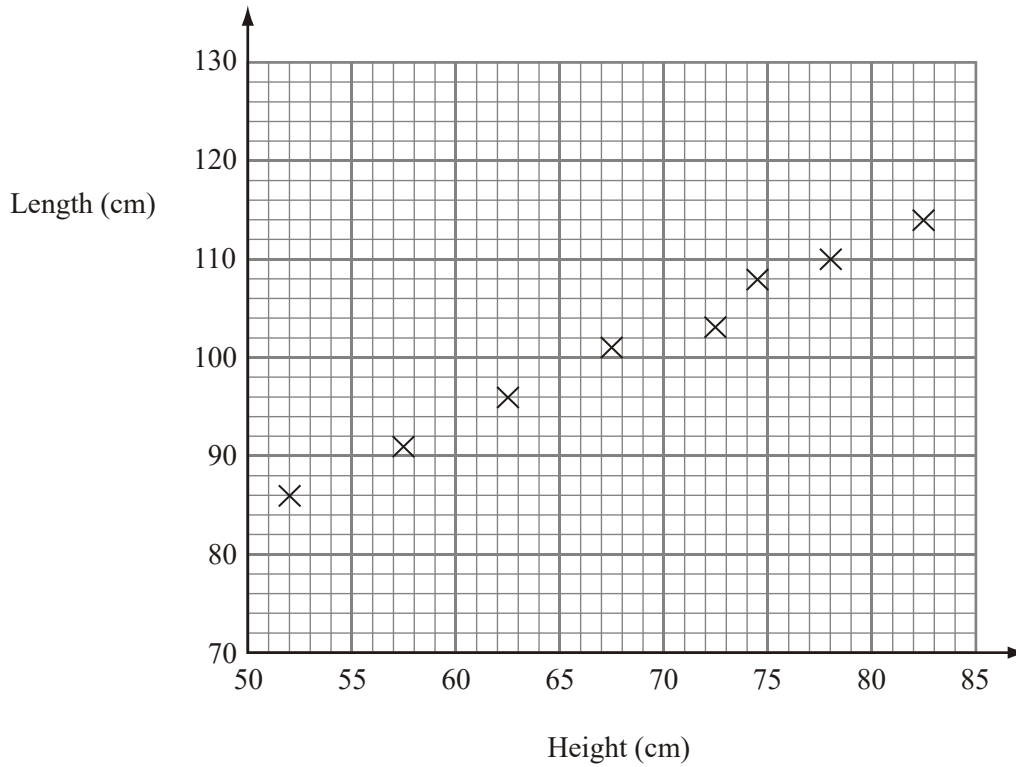
(e) Estimate the height above sea level of this weather station.

..... m

(1)

(Total 5 marks)

10. The scatter graph shows information about eight sheep. It shows the height and the length of each sheep.



The table gives the height and the length of two more sheep.

Height (cm)	65	80
Length (cm)	100	110

- (a) On the scatter graph, plot the information from the table.

(1)

- (b) Describe the relationship between the height and the length of these sheep.

.....

(1)

The height of a sheep is 76 cm.

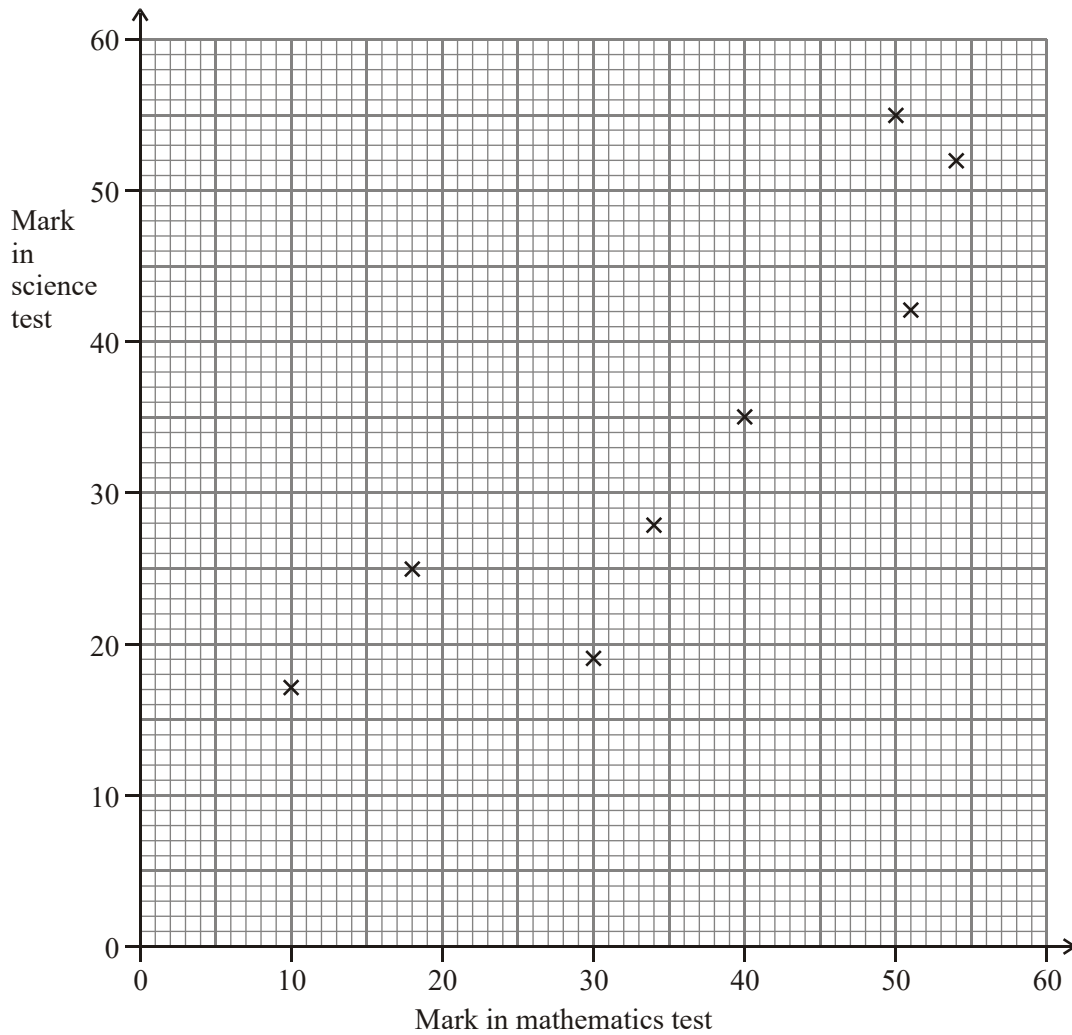
(c) Estimate the length of this sheep.

.....cm

(2)

(Total 4 marks)

11. Some students took a mathematics test and a science test.
The scatter graph shows information about the test marks of eight students.



The table shows the test marks of four more students.

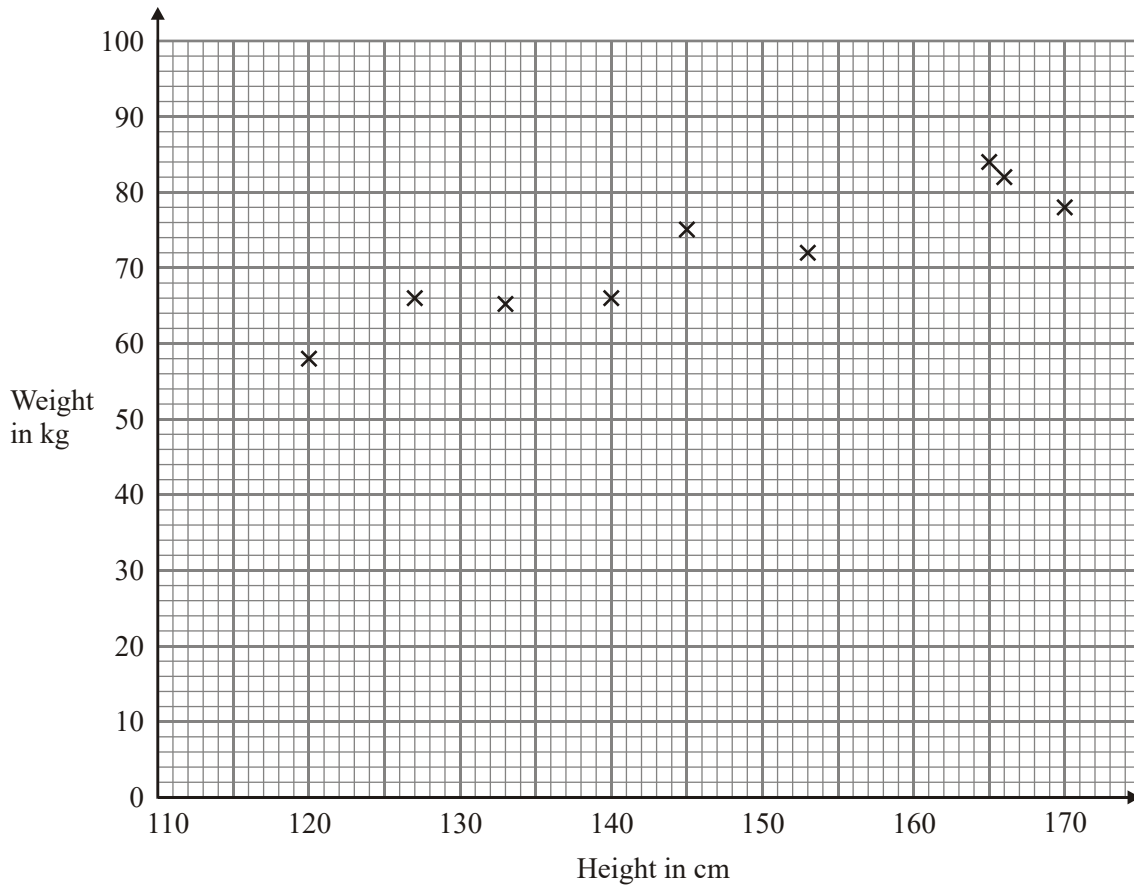
Mark in mathematics test	14	25	50	58
Mark in science test	21	23	38	51

- (a) On the scatter graph, plot the information from the table. (2)
- (b) Draw a line of best fit on the scatter graph. (1)
- (c) Draw the **correlation** between the marks in the mathematics test and the marks in the science test.

.....

(1)
(Total 4 marks)

12. The scatter graph shows information about the height and the weight for nine students.



The table shows the height and the weight for three more students.

Height in cm	135	155	170
Weight in kg	70	75	85

(a) On the scatter graph, plot the information from the table.

(1)

(b) What type of correlation does this scatter graph show?

.....

(1)

(c) Draw a line of best fit on the scatter graph.

The weight of another student is 80 kg.

(1)

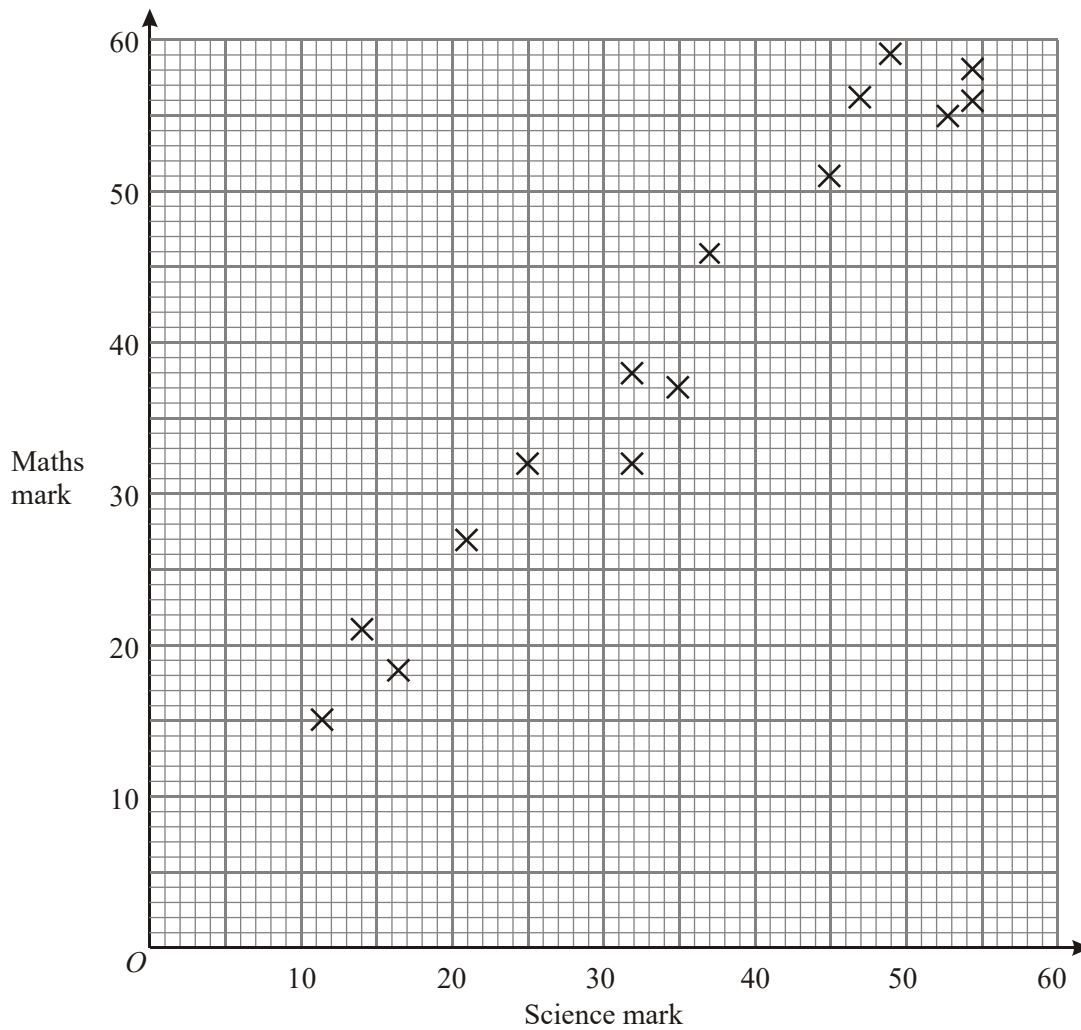
(d) Use your line of best fit to estimate the height of this student.

.....cm

(1)

(Total 4 marks)

13. The scatter graph shows the Science mark and the Maths mark for 15 students.



(a) What type of correlation does this scatter graph show?

.....

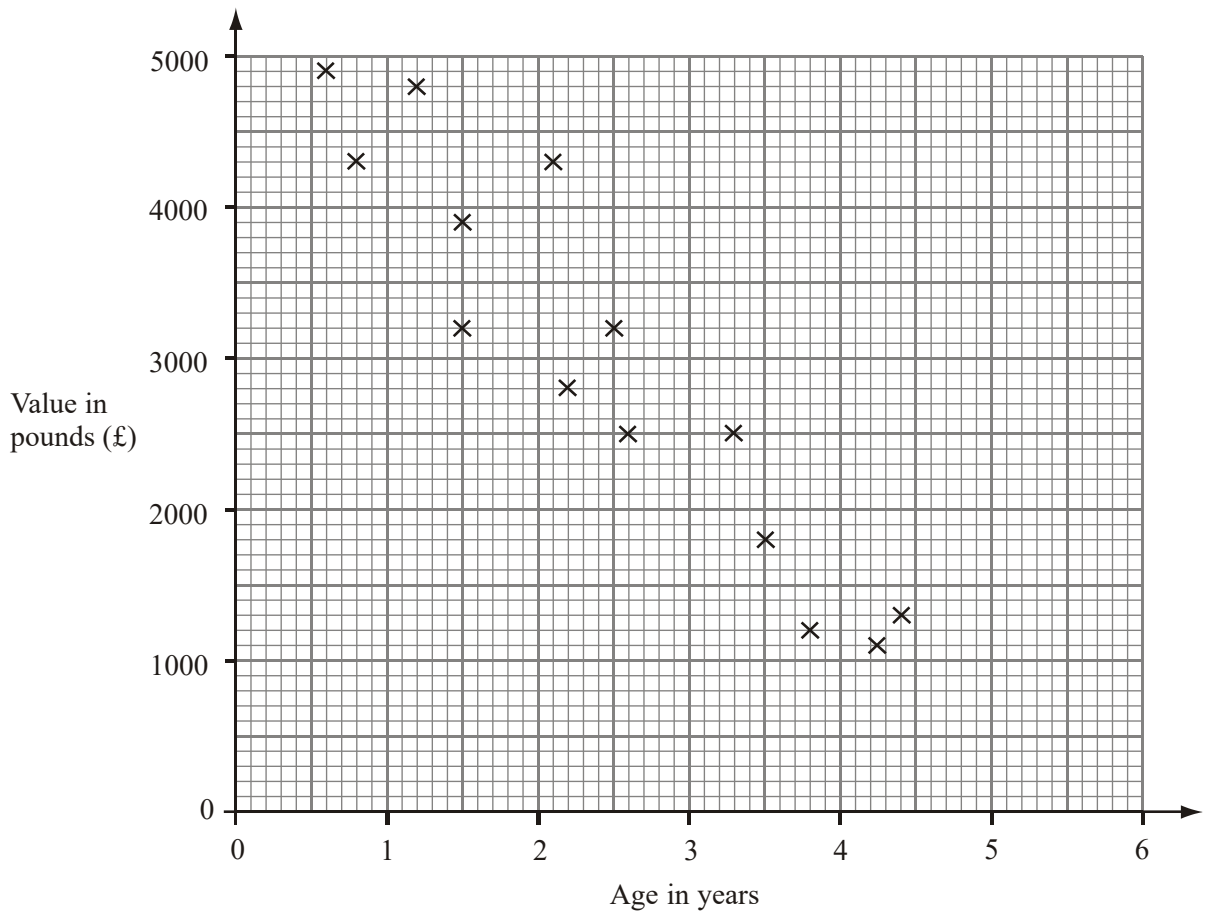
(1)

(b) Draw a line of best fit on the scatter graph.

(1)

(Total 2 marks)

14. The scatter graph shows some information about the ages and values of fourteen cars. The cars are the same make and type.



(a) Describe the relationship between the age of a car and its value in pounds.

.....

(1)

(b) Draw a line of best fit on the scatter graph. (1)

A car is 3 years old.

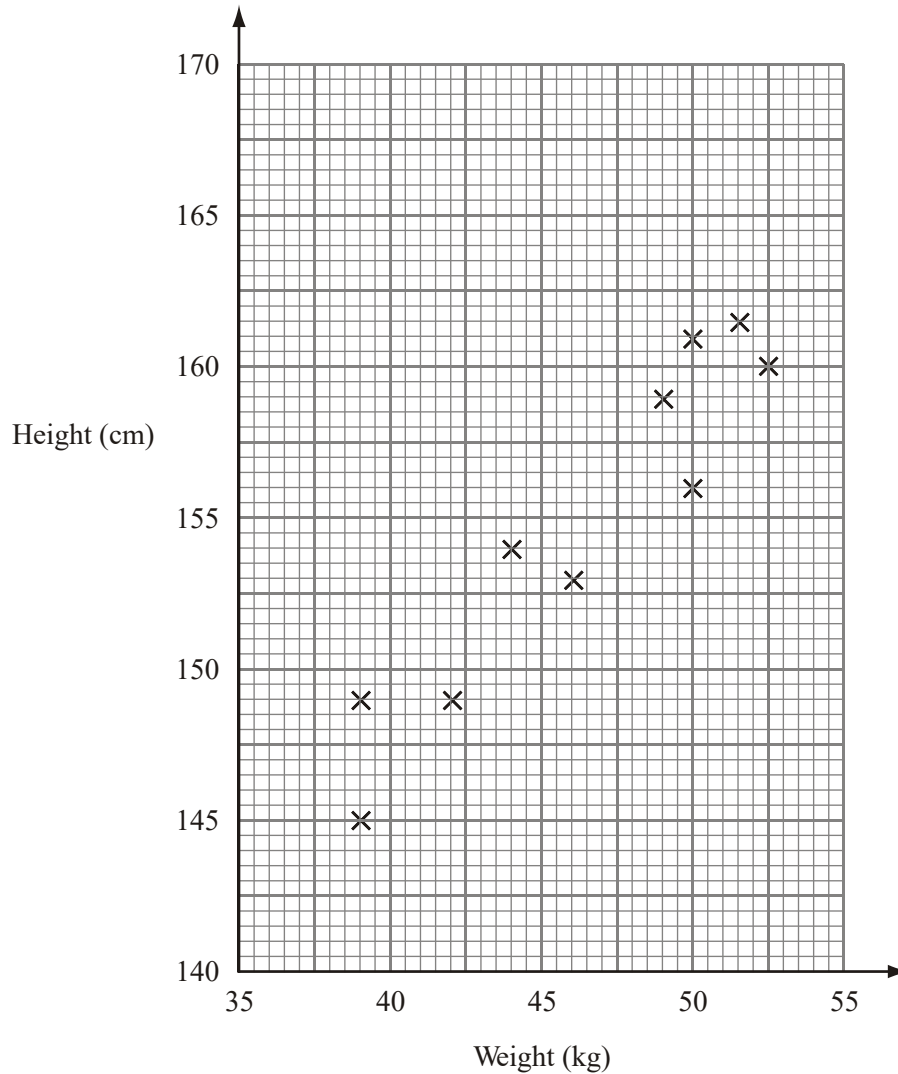
(c) Use your line of best fit to find an estimate of its value.
£ (1)

A car has a value of £3500

(d) Use your line of best fit to find an estimate of its age.
..... years (1)
(Total 4 marks)

15. Jake recorded the weight, in kg, and the height, in cm, of each of ten children.

The scatter graph shows information about his results.



(a) Describe the relationship between the weight and the height of these children.

.....

(1)

(b) Draw a line of best fit on the scatter graph.

(1)

(c) Use your line of best fit to estimate the height of a child whose weight is 47 kg.

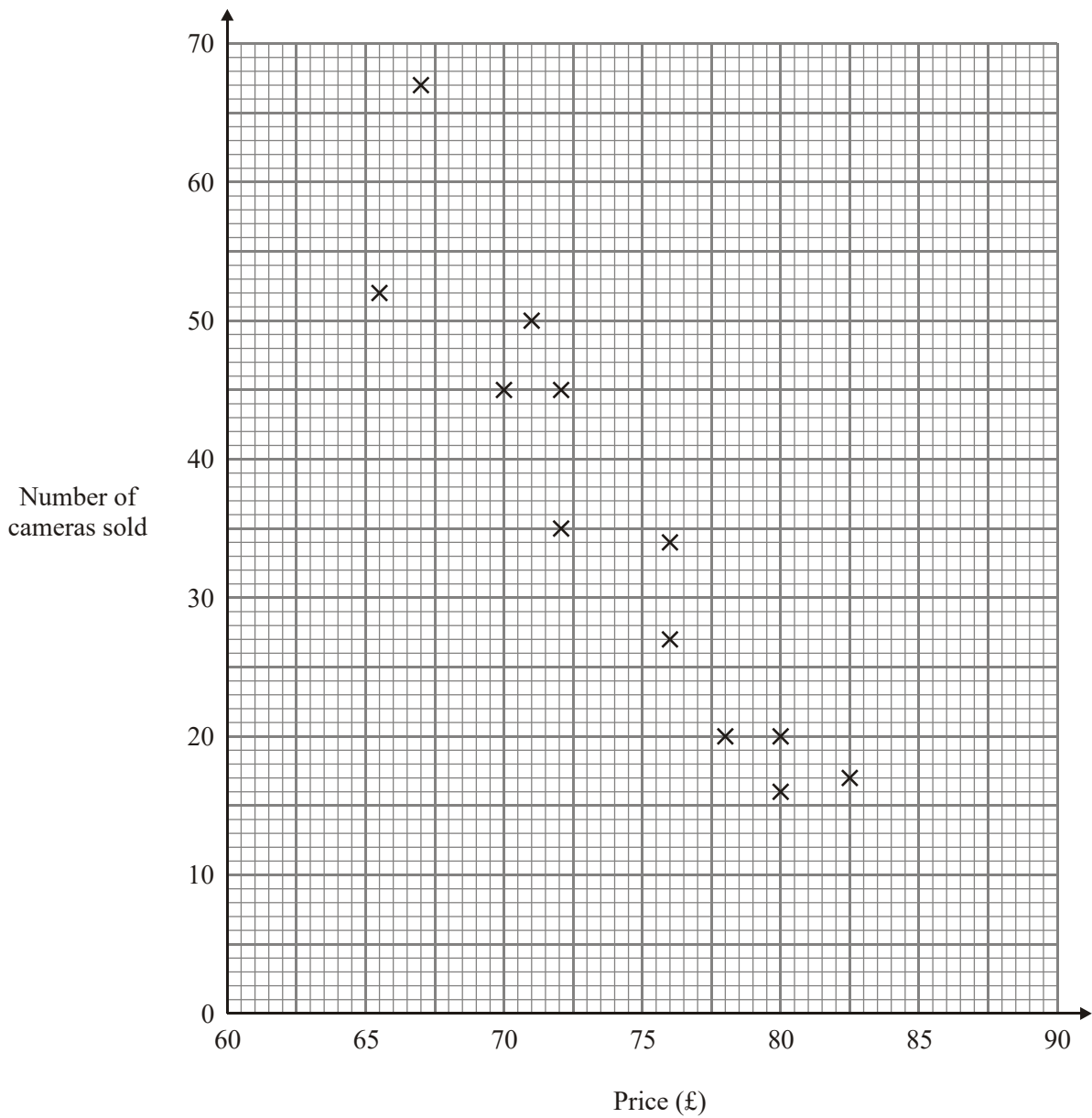
..... cm

(1)

(Total 3 marks)

16. A superstore sells the Clicapic digital camera.
 The price of the camera changes each week.
 Each week the manager records the price of the camera and the number of cameras sold that week.

The scatter graph shows this information.



- (a) Describe the relationship between the price of the camera and the number of cameras sold.

.....
.....

(1)

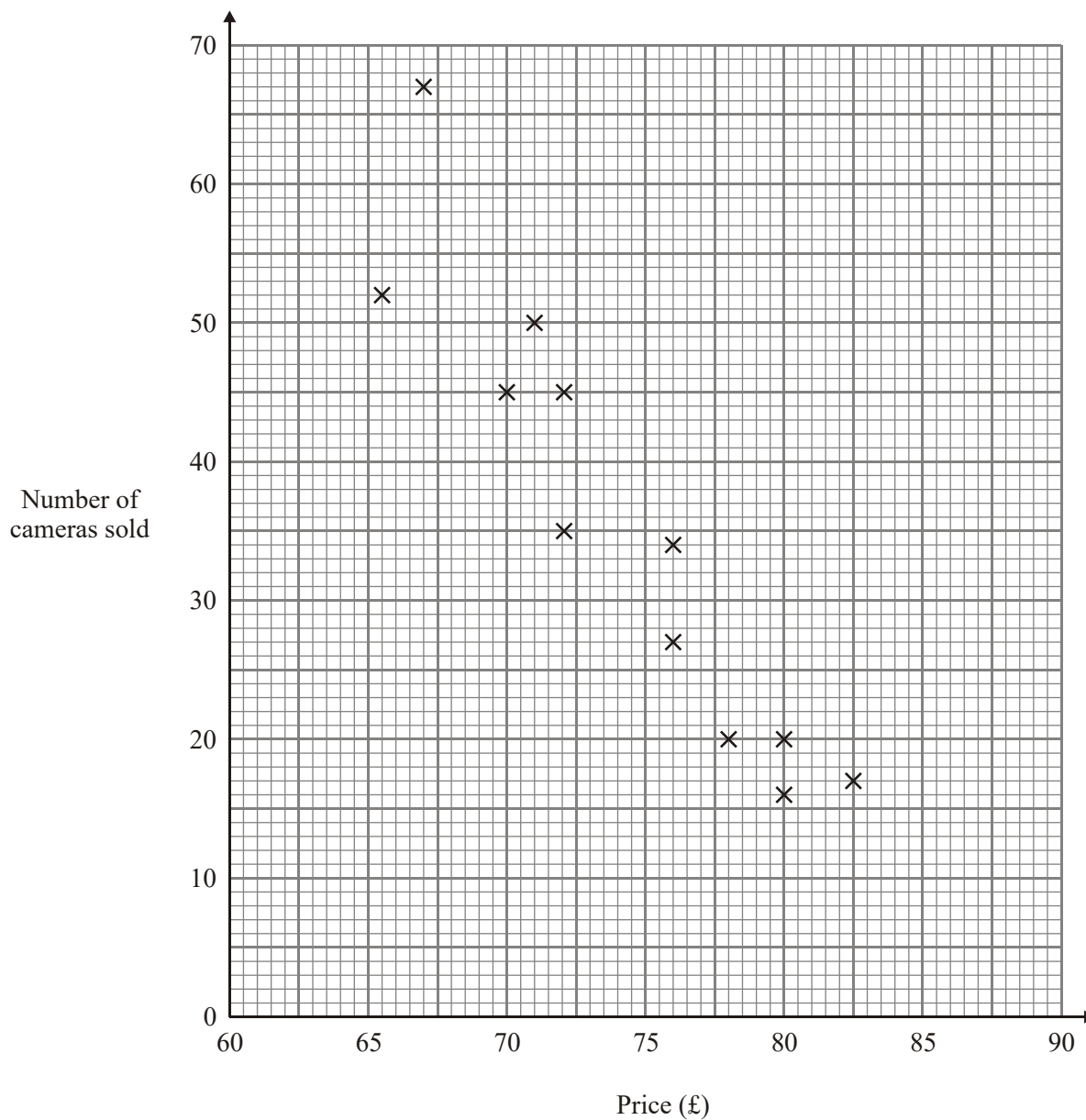
- (b) Draw a line of best fit on the scatter graph.

(1)

(Total 2 marks)

17. A superstore sells the Clicapic digital camera. The price of the camera changes each week. Each week the manager records the price of the camera and the number of cameras sold that week.

The scatter graph shows this information.



The table shows the prices and the numbers of Clicapic cameras sold during another 4 weeks.

Price (£)	67	70	75	80
Number of cameras sold	50	50	40	25

(a) On the scatter graph, plot the information from the table. (2)

(b) Describe the relationship between the price of the camera and the number of cameras sold.

.....
.....

(1)

(c) Draw a line of best fit on the scatter graph. (1)

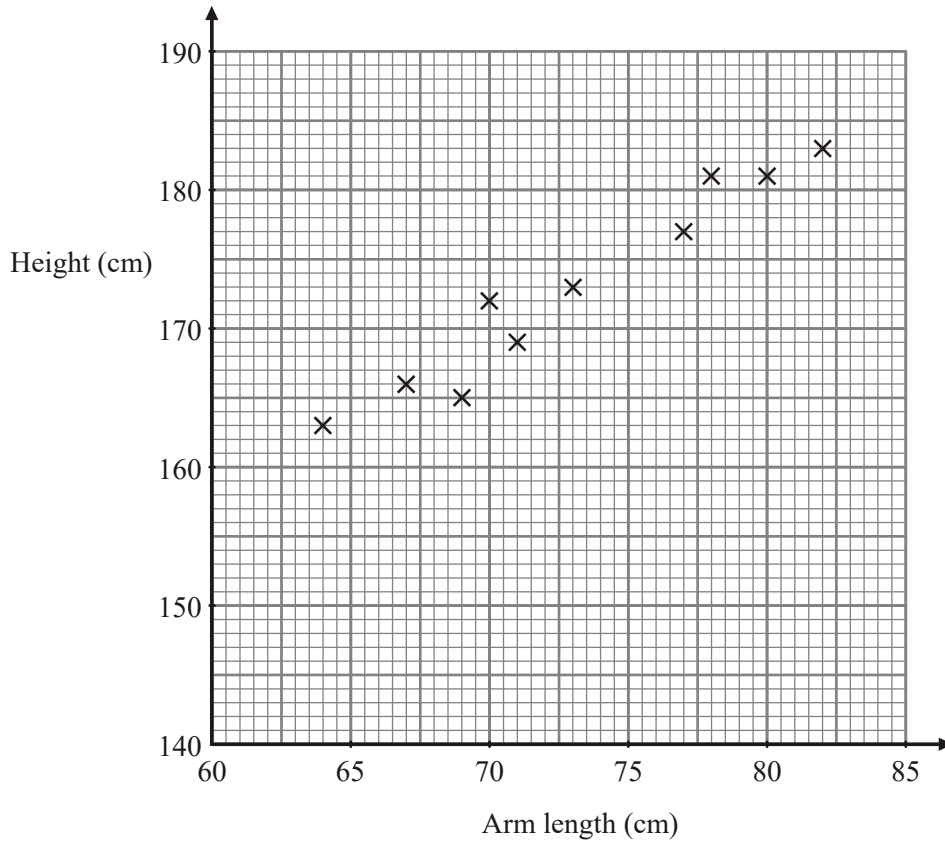
(d) Use your line of best fit to estimate how many cameras are sold in a week when the price is £74

.....

(1)

(Total 5 marks)

18. The scatter graph shows some information about 10 students. It shows the arm length and the height of each student.



- (a) What type of correlation does this scatter graph show?

.....

(1)

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

(1)

Another student has an arm length of 75 cm.

- (c) Use your line of best fit to estimate the height of this student.

..... cm

(1)

(Total 3 marks)

01. (a) Negative **or** as urban goes up, farming goes down 1
Bl cao oe
- (b) Line within tolerance. 1
Bl for line within overlay lines, at least 10cm in length
- (c) 35° farming 1
Bl ft ±½ dep on single straight line with negative gradient

[3]

02. (a) Plots 1
Bl cao
- (b) description 1
Bl dynamic relationship or “positive” (correlation)
- (c) line of best fit 1
Line within overlay region, and to the extent of.
- (d) (i) reading 2
 280 g →
Bl ft from single straight line of positive gradient (± 1/2 square)
- (ii) reading
 120 pages →
Bl ft from single straight line of positive gradient (± 1/2 square)

[5]

03. (a) Correct plots 1
B1 cao ± 1 for full square tolerance
- (b) Description 1
B1 description of relationship or correlation
- (c) LOBF 1
B1 between verticals: (3000, 1300), (3000, 1500) and (500, 200), (500, 400)
- (d) (£1170) 1
B1 ft from lobf dep on a single straight line segment of positive gradient ± 1 full square (± 20)
- (e) (43cm) 2
 Read off at £1000 (2080) and then – 48
*B2 for answers in the range 36 – 49
 or M1 read off and – 48, ft from lobf dep on a single straight line segment of positive gradient ± 1 full square (± 20).
 A1 ft or 36cm – 49cm*

[6]

04. 43cm 2
 Read off at £1000 (2100) and then – 48
*M1 read off (2000-2200) and – by 48
 A1 43.7cm - 44.8cm*

[2]

05. (a) *B1 two points ± 1 full square tolerance* 1
- (b) Positive 1
B1 for Positive; ignore “strong” etc
- (c) *B1 for line of best fit which passes across (50, 50), (50, 60) and (20, 20), (20, 30)* 1
- (d) French 26 → 29 – 32 2
B1 29–32 or ft (dep on a single straight line of positive gradient) ± 1 full square
- German 43 → 38 – 41
B1 38 – 41 or ft (dep on a single straight line of positive gradient) ± 1 full square

[5]

06. (a) Positive 1
BI for positive
- (b) *BI for correct line within (50, 50), (50, 60) and (10, 10), (10, 20)* 1
Do not accept line joining (10, 10) to (50, 50)
- (c) approx 47 1
BI ft for a single line segment with positive gradient ± 1 full (2mm) square
- [3]**
07. (a) negative 1
BI cao
- (b) line of best fit 1
BI straight line passing between (4, 15) and (4, 20) and between (1, 40) and (1, 45)
- (c) (i) ~22 2
BI ft from single line segment with negative gradient ± 1 full (2mm) square
- (ii) ~2.8
BI ft from single line segment with negative gradient ± 1 full (2mm) square
- [4]**
08. (a) Points 1
BI all three points ± 1 full square
- (b) Negative 1
BI Negative (ignore additional descriptors unless contradictory)
- (c) lobf 1
BI A single straight line drawn to cross between (5, 30), (5, 40) and (40, 0), (40, 15); accept freehand if considered to be straight.

- (d) (i) 18 – 25
B1 18g – 25g inclusive or if not in this range ft ± 1 square dep on single straight line with negative gradient.
- (ii) 30 – 40
B1 30 – 40 min inclusive or if not in this range ft ± 1 square dep on single straight line with negative gradient

[5]

09. (a) Points plotted
B1 points plotted ± 1 full smallest square tolerance. 1
- (b) Negative
B1 1
- (c) lbf
B1 lbf that goes between (8, 2000) and (8, 2400) and between (24, 0) and (24, 500) 1
- (d) 11-13
B1 11-13 or ft (tol ± 1 square) from single straight line segment with a negative gradient 1
- (e) 850-1150
B1 850-1150 or ft (tol ± 1 square) from single straight line segment with a negative gradient 1

[5]

10. (a) (65, 100), (80, 110) plotted
B1 for plotting both points (65, 100), (80, 110) correctly (tolerance one square); ignore any additional plots given. 1
- (b) positive (correlation)
*B1 for positive (correlation) or length increases with height
 oe* 1

- (c) 105 – 110 2
M1 for a single line segment with positive gradient that could be used as a line of best fit or a vertical line from 76
A1 for given answer in the range 105 – 110 [4]
11. (a) Points plotted 2
B2 for 4 points plotted correctly
(B1 for 2 or 3 points plotted correctly)
- (b) Line drawn 1
B1 for line within overlay extending from 20 to 50 on the maths axis
- (c) Positive 1
B1 for positive correlation [4]
12. (a) plots (135, 70), (155, 75), (170, 85) 1
B1
- (b) positive 1
B1
- (c) line of best fit 1
B1 for line passing between (170, 90) – (170, 70) and (120, 50) – (120, 70) and at least 2 points on each side of the line
- (d) reading at 80 down 1
B1 ft from “line of best fit” $\pm \frac{1}{2}$ square [4]
13. (a) Positive 1
B1 for positive
- (b) *B1 for correct line within (50, 50), (50, 60), (10, 10) (10, 20)* 1
Do not accept line joining (10, 10) to (50, 50) [2]

14. (a) Description 1
Bl for e.g. the older the car, the less its value, Negative correlation
- (b) Line of best fit 1
Bl for line (1, 4200 to 4700) to (4, 1000 to 1600)
- (c) Estimate at 3 yrs 1
Bl ft from their line $\pm \frac{1}{2}$ square
If no line drawn accept value in range 2200 – 2500
- (d) Estimate at £3500 1
Bl ft from their line $\pm \frac{1}{2}$ square
If no line drawn accept value in range 1.8 to 2.1 inc
- [4]**
15. (a) height increases with weight 1
Bl for increase in height with weight
(accept positive correlation)
- (b) line of best fit drawn (overlay) 1
Bl for line between (40, 145) and (40, 150) and between (50, 156) and (50, 161)
- (c) 1
Bl if 152.5 – 157.5 seen or ft from their line dependent on positive gradient
- [3]**
16. (a) As the price increases the number of cameras sold decreases. 1
Bl for decrease in number sold with increase in price oe
(accept negative correlation)
- (b) Line of best fit 1
Bl for line within given limits passing between (70, 40) & (70, 55) and between (80, 15) & (80, 30)
- [2]**

17. (a) (67, 50), (70, 50), (75, 40), (80, 25) 2
B2 for 4 points plotted correctly (allow ± 2 mm tolerance)
(B1 for 2 or 3 points plotted correctly)
- (b) As the price increases the number of cameras sold decreases 1
B1 for decrease in number sold with price.
(accept negative correlation)
- (c) line of best fit 1
B1 for line within given limits passing between (70, 40) & (70, 55) and between (80, 15) & (80, 30)
- (d) 35 – 39 1
B1 for 35 – 39 or ft their line of best fit from 74
(allow ± 2 mm tolerance)

[5]

18. (a) Positive 1
B1 cao (Accept +ve)
- (b) Line of best fit 1
B1 for a straight line passing between (65, 160) and (65, 166)
and between (80, 178) and (80, 184)
- (c) 173 – 176 1
B1 for 173 – 176 or ft from a single line segment with positive
gradient ± 1 full (2mm) square

[3]

01. A surprising number of candidates found difficulty in finding the relationship, preferring to describe a single point, or making speculative statements about people living in towns and on farms. Nearly all candidates drew a single straight line (of negative gradient) as a line of best fit, and then went on to use this to accurately read off a value.

02. Paper 2

There was wide variation in the success achieved on this question. The points were often plotted accurately; if one error was made it was usually with (105, 210), which was frequently plotted at (110, 210).

“Positive” was accepted as a description of the relationship, as were statements like “As the number of pages increases, so does the weight.” Statements such as “Books with a large number of pages are heavy” were not accepted.

Most of those who drew a line of best fit used it successfully to answer the final part.

Paper 4

Most candidates scored the mark for plotting, the only one causing a problem was (105, 210). Few candidates were unable to give an appropriate description for the relationship. The line of best fit was also well drawn by most candidates. The only common error here was in starting their line of best fit from the bottom corner (60, 160), or attempts to put in a free-hand line. There was some mis-reading of the scale, but in this question most candidates took care to be accurate in taking readings, many drawing in lines to assist them, which did help. Overall a well-answered question.

- 03.** Candidates clearly felt on more familiar territory with this question: over $\frac{2}{3}$ of candidates gained all the marks in parts (b), (c) and (d). Candidates who failed to get the mark for a line of best fit clearly did not understand what was needed, drawing the line well away from the given points (plotting in (a) was not a distracter) or not drawing a single line at all. It was pleasing to find so many candidates accurately reading off the line using the correct scale. Unfortunately many of these seemed unable to use the scale correctly in part (a), and therefore lost the mark for incorrect plotting. In part (e) the common error was to find candidates merely writing down the value from the graph, without dividing by the given value of 48. Again, trial and improvement methods were common, where candidates tried various multiples of 48 without doing a division.
- 04.** Candidates were expected to use the given line of best fit to estimate the area of a picture costing £1 000. They then had to divide the estimated area by 48 in order to find the length of other side of the rectangular picture. Most candidates were clear on what was required and achieved an answer in the required range.
- 05.** Most candidates gained the marks in parts (a) to (c). Points were rarely plotted incorrectly, the first mark being lost mainly by those who failed to attempt to plot the points at all. Lines of best fit were good, with few merely joining the points together. Many read from their graphs accurately, the only common error being to read from a German mark of 26 instead of a French mark of 26.

06. Foundation Tier

Candidates obviously understood the concept of correlation from their handling data coursework and 57% of them were able to draw the line of best fit on their graph. However only 23% understood it was positive correlation and only 34% could read off from their line of best fit.

Intermediate Tier

All three parts of this question were answered very well. In part (a) the majority of candidates identified the correlation as positive but there were a variety of incorrect responses, including 'good', 'strong' and even 'negative'. Despite the relatively small space in which to respond, some described the relationship between the Maths mark and the Science mark. Most candidates drew an acceptable line of best fit in part (b) although some lines were too short. A common error in part (c) was to give the Science mark corresponding to a Maths mark of 42. Some candidates showed a correct method but were careless in reading the scale, writing 37 or 57, for example, instead of 47.

- 07.** This question was answered well. The majority of candidates showed awareness that 'positive' or 'negative' is required when describing correlation and that a straight line is required when drawing the line of best fit. The most common error in part (a) was to identify the correlation as positive. In part (b), the lines of best fit were generally well drawn with a ruler and within the bounds required. Some were outside the bounds because candidates drew the line to go through one of the corners of the grid. Most candidates were able to read accurately from their line of best fit in part (c). Some misread the vertical scale, giving, for example, 20.4 instead of 24

08. Foundation Tier

This question was quite well attempted by candidates of all abilities. It provided the opportunity even for weaker candidates to gain an easy mark for plotting the three points in part (a). Unfortunately, some candidates had apparently not seen the demand and did not plot any points. A good proportion of candidates were able to correctly describe the correlation and the line of best fit was well attempted with most candidates drawing the line within the tolerance allowed. Most candidates were able to give reasonable estimates for the weight and number of minutes requested in part (d) of the question.

Intermediate Tier

Most plotted the points, but it was surprising that a significant minority failed to attempt to plot the points, and moved straight on to the line of best fit. In part (b) "Negative" was prevalent; describing the relationship rather than stating the correlation did not earn the mark. There were fewer occasions where candidates merely joined the points for the line of best fit, and fewer curves. Some lost marks through failing to draw lines that were long enough, or giving lines that were well outside the range of points.

Part (d) was well answered, but probably because the sampling on the axes was simple in this question.

09. There was a lot of careless plotting where the point at $x = 22$ was plotted wrongly at $x = 21$. Most candidates knew this was negative correlation although a few tried to give a description. The line of best fit was generally well drawn although in some cases it was too short. Most candidates knew and could apply the technique of reading off values from the diagram.
10. Most candidates gained marks in this question. Plotting was done in part (a) with relative ease, but the descriptions in part (b) sometimes lost marks because they were not general enough: commenting on a single point will not earn the mark. In part (c) candidates were expected to make a reasonable estimate which in many cases gained marks, with or without a line of best fit. In some cases it was clear the candidate was failing to see their answer within the context of the problem, for example giving an answer less than 70.
11. The scatter diagram was not well handled with very few candidates scoring all four marks. The plotting of points in part (a) was badly done by a significant number of candidates along with a lack of accuracy in placing the points despite the straightforward scale on the axes. Many confused the axes plotting the mathematics test mark vertically. Many candidates did not understand the concept of a line of best fit and joined all the points with a zigzag line. Recognition of a positive correlation was rare with the answer line frequently left blank or a complex description given which did not relate to the question being asked.
12. The points generally plotted well with $\frac{3}{4}$ of the candidates scoring the available mark. In part (b) candidates mostly described the relationship as 'taller are heavier' with only a fifth of the candidates understanding that the scatter graph showed a positive correlation. Over half the candidates were not able to draw a reasonable line of best fit. Many joined all the points with straight lines or curves. These candidates very often described the correlation in part (b) as 'zigzag'.
Most candidates attempted part (d) but even when the correct line was drawn in at 80 to their line of best fit, candidates found it very difficult to read down accurately. However nearly a third of the candidates were able to score the mark from correctly reading the value from their (straight) line of best fit.
13. This question was answered well with the majority of candidates correctly describing the correlation in part (a), although there was a variety of spelling alternatives for "positive". In part (b) the line of best fit was usually accurately drawn. Many assumed that the line started at the point (0, 0) and lost the mark if their line was not within acceptable tolerance. Freehand drawn lines often failed to score.

14. The idea of a line of best fit appeared to be well understood in the majority of cases with most candidates being able to draw one to the required degree of accuracy. 94% of candidates were able to describe the relationship with only a few contradicting themselves. Occasionally negative on its own seen, and negative relationship, and sometimes positive. Taking an estimate from the line of best fit was also well handled apart from the fact that there was a tendency to 'round' the result so that the value for age in years would be an integer value.

15. Foundation

Almost a half of the candidates scored full marks on this question.

Parts (a) and (b) of this question were well done with a good proportion of candidates able to express the relationship between height and weight in words or describe the relationship as "positive correlation". Some candidates gave "positive" or "positive relationship" as their answer. This was insufficient. Lines of best fit were usually drawn within the acceptable tolerance and only a small number of candidates joined the points. Part (c) was quite well answered though many candidates appeared not to have fully understood the vertical scale on the graph and gave 158 cm as their answer when 156.5 was indicated by marks they had made on the graph.

Higher

All parts of this question were very well done with 87% of candidates scoring all three marks. There were some candidates who didn't understand the concept of a 'line of best fit' and instead, joined the points in part (b). A few candidates gave only 2 digits (e.g. 55) as their answer to part (c) of this question.

16. In part (a), many candidates were able to write down an acceptable description of the relationship between the price and the number of cameras sold. A common error here was to just comment on the extreme values, e.g. 'the expensive cameras didn't sell very well', or to describe the correlation as simply "negative". In part (b), many candidates were able to draw a suitable line of best fit within the required limits, but it was clear that a significant number of candidates were not equipped with a ruler. Candidates should be advised to bring the appropriate equipment to this examination.

A common error here was to join the points with line segments, or to draw a line with positive gradient (usually through the origin).

17. This question was answered well by the majority of candidates, but a significant number of candidates had difficulty in interpreting the horizontal scale.

A common error in part (a) was to plot the point (67, 50) at (66, 50) or at (68, 50).

In part (b), many candidates were able to write down an acceptable description of the relationship between the price and the number of cameras sold. A common error here was to just comment on the extreme values, e.g. ‘the expensive cameras didn’t sell very well’, or to describe the correlation as simply “negative”. In part (c), most candidates were able to draw a suitable line of best fit within the required limits. In part (d), a common error was to read the graph at £72 or at £74.50, rather than at £74.

18. Foundation

It was pleasing to see that over 36% scored all 3 marks on the last question on this section with a further 31% scoring 2 marks. Many did not realise that the word ‘positive’ was required in (a) but this did not put them off answering the rest of the question. Some unusual descriptions were seen but to describe the correlation as a “line of misfit” was perhaps taking things a little too far.

The most common error was in part (b) where many candidates felt the line of best fit had to go through the origin (60, 140) although they could still pick up the mark in (c) for an accurate reading from their line of best fit. It is also important that the line of best fit should be of sufficient length to cover the range of the given points; in some cases it was short of this length by a considerable amount. Merely joining up the points with a series of zigzag lines was never going to satisfy the requirement of a line of best fit.

Higher

This question was also well done by the candidates on the Higher Tier with nearly 95% of the candidates scoring 2 or 3 marks. The most common error was in part (b) where many candidates felt the line of best fit had to go through the origin (60, 140) although they could still pick up the mark in (c) for an accurate reading from their line of best fit.