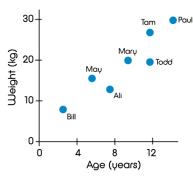


#### Basic

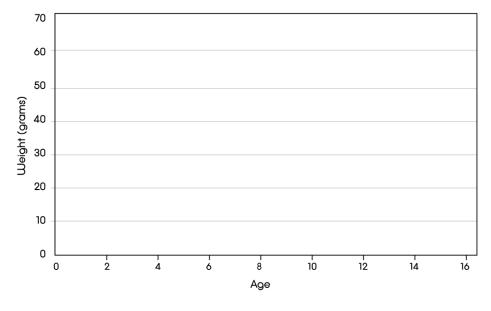
1) This scattergraph shows the ages and weights of several children.



- a) Who is the oldest child and what is their weight?
- b) What is unusual about both Ali and Todd?
- 2) The data below shows the age (in days) and weight (in grams) of 10 pet rats.

Age	10	11	6	4	3	9	5	14	8	10
Weight	50	50	25	20	15	40	30	60	20	45

- a) Draw a scatter diagram for this information.
- b) Draw the line of best fit.



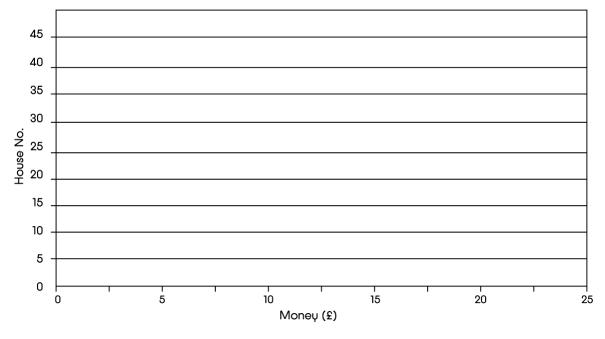


#### **Basic**

- 2) c) Use the line of best fit to estimate the age of a rat that weighs 35 grams.
- d) One of the rats has been poorly. Which one?
- e) Describe the correlation between the age of a rat and its weight.
- 3) The data below shows the house number and pocket money of students.

Moneγ (£)	5	10	5	10	20	18	10	5	15	10
House No.	12	9	30	1	20	40	30	15	35	28

a) Draw a scatter diagram for this information.



- b) Is it possible to draw a line of best fit?
- c) Is there a correlation between the house number and pocket money of students?



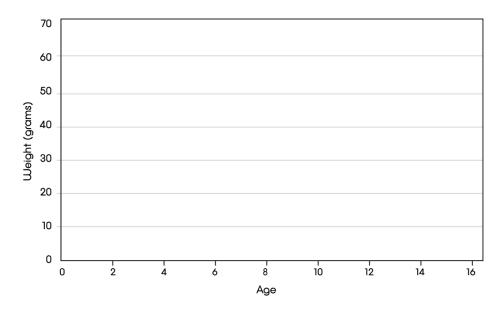
NAME:	
CLASS:	
DATE:	

#### Core

1) The data below shows the age (in days) and weight (in grams) of 10 pet rats.

Age	10	11	6	4	3	9	5	14	8	10
Weight	50	50	25	20	15	40	30	60	20	45

- a) Draw a scatter diagram for this information.
- b) Draw the line of best fit.



- c) Use the line of best fit to estimate the age of a rat that weighs 35 grams.
- d) One of the rats has been poorly. Which one?
- e) Describe the correlation between the age of a rat and its weight.

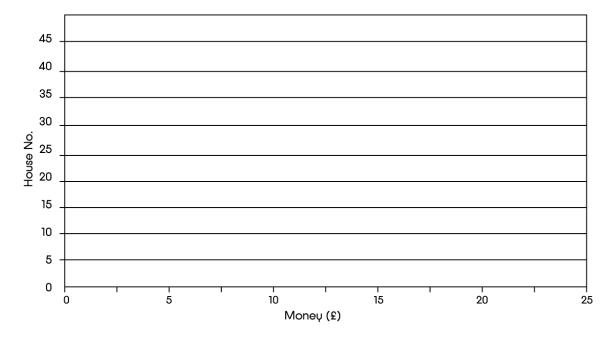


#### Core

2) The data below shows the house number and pocket money of students.

Moneγ (£)	5	10	5	10	20	18	10	5	15	10
House No.	12	9	30	1	20	40	30	15	35	28

a) Draw a scatter diagram for this information.



b) Is it possible to draw a line of best fit?

c) Is there a correlation between the house number and pocket money of students?

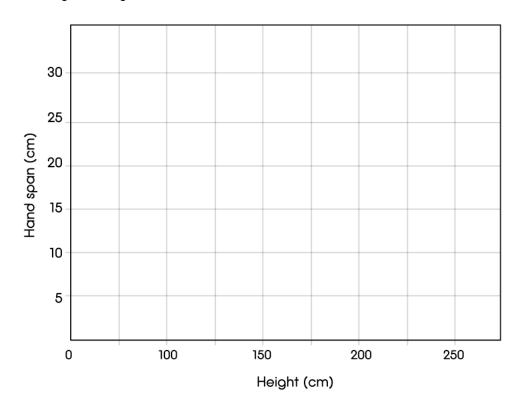


#### Core

- 3) Do taller people have bigger hands?
- a) Collect the heights and hand spans from members of your group and record them in a table similar to that below.

Student	Height (cm)	Hand span (cm)

b) Draw a scatter diagram using this information.



c) Is the statement "taller people have bigger hands" true for your group?



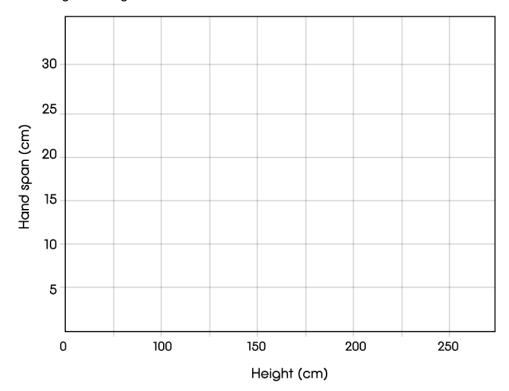
NAME:	
CLASS:	
DATE:	

#### **Advanced**

- 1) Do taller people have bigger hands?
- a) Collect the heights and hand spans from members of your group and record them in a table similar to that below.

Student	Height (cm)	Hand span (cm)

b) Draw a scatter diagram using this information.



c) Is the statement "taller people have bigger hands" true for your group?

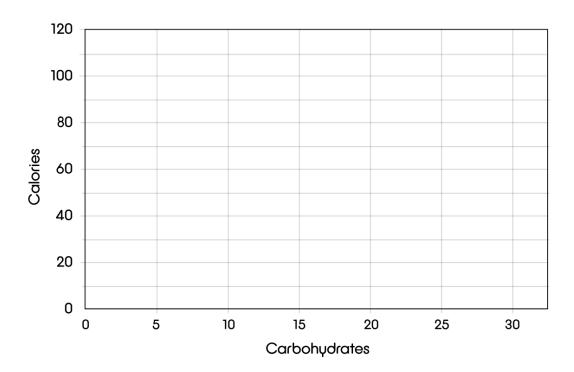


#### **Advanced**

2) The table below shows the number of calories and number of grams of carbohydrate in equivalent servings of different vegetables.

Carbohydrates	10	25	4	6	20	8	12	13	16
Calories	46	100	19	23	105	35	45	75	80

- a) Draw a scatter diagram for this information.
- b) Draw the line of best fit.



- c) Use the line of best fit to estimate the number of calories if a vegetable contains 15g of carbohydrate.
- d) Describe the correlation.
- e) Is this a causal relationship?



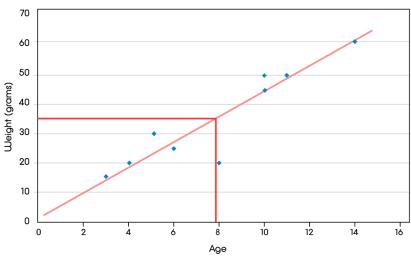
### **ANSWERS**

#### **Basic**

1) a) Paul 30kg

b) They are lighter than expected for their ages.

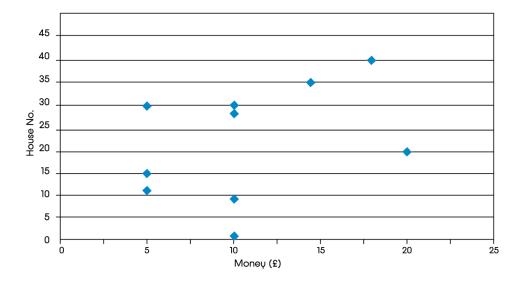
2) a) & b)



c) 8 days

- d) The 8-day-old one
- e) Positive

- 3) b) There is no line of best fit
- c) There is no correlation

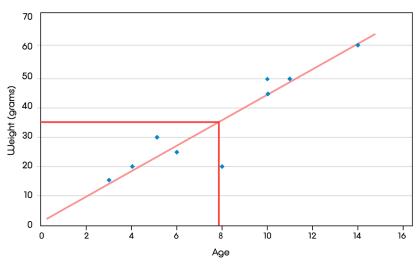




### **ANSWERS**

Core

1) a) & b)

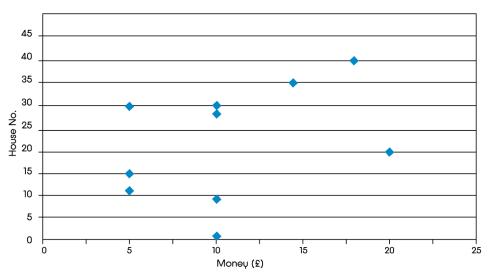


c) 8 days

d) The 8-day-old one

e) Positive

2) a)



b) There is no line of best fit

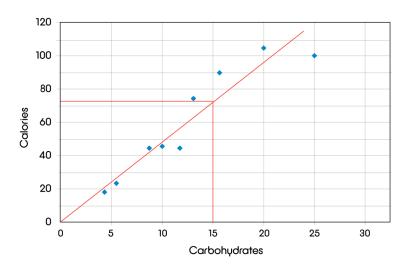
c) There is no correlation



### **ANSWERS**

#### **Advanced**

2) a) & b)



c) 72 d) Positive e) Yes