

Mathematics

Representing bivariate data

Mr Millar



Try this

Are the following statements true or false?

Age of car (years)	Price of car (£ thousands)
1	6
8	4
0	10
3	3
4	4
2	5
2	5
5	4
5	5
7	2

The table gives information on 20 different cars.

The modal price of a car is £ 5 000.

The range of the ages of the cars is 10 years.

The brand new car costs £6 000 more than the car which is 4 years old.

The cars which cost £4 000 are the same age.

The two 3s in the table have the same meaning.

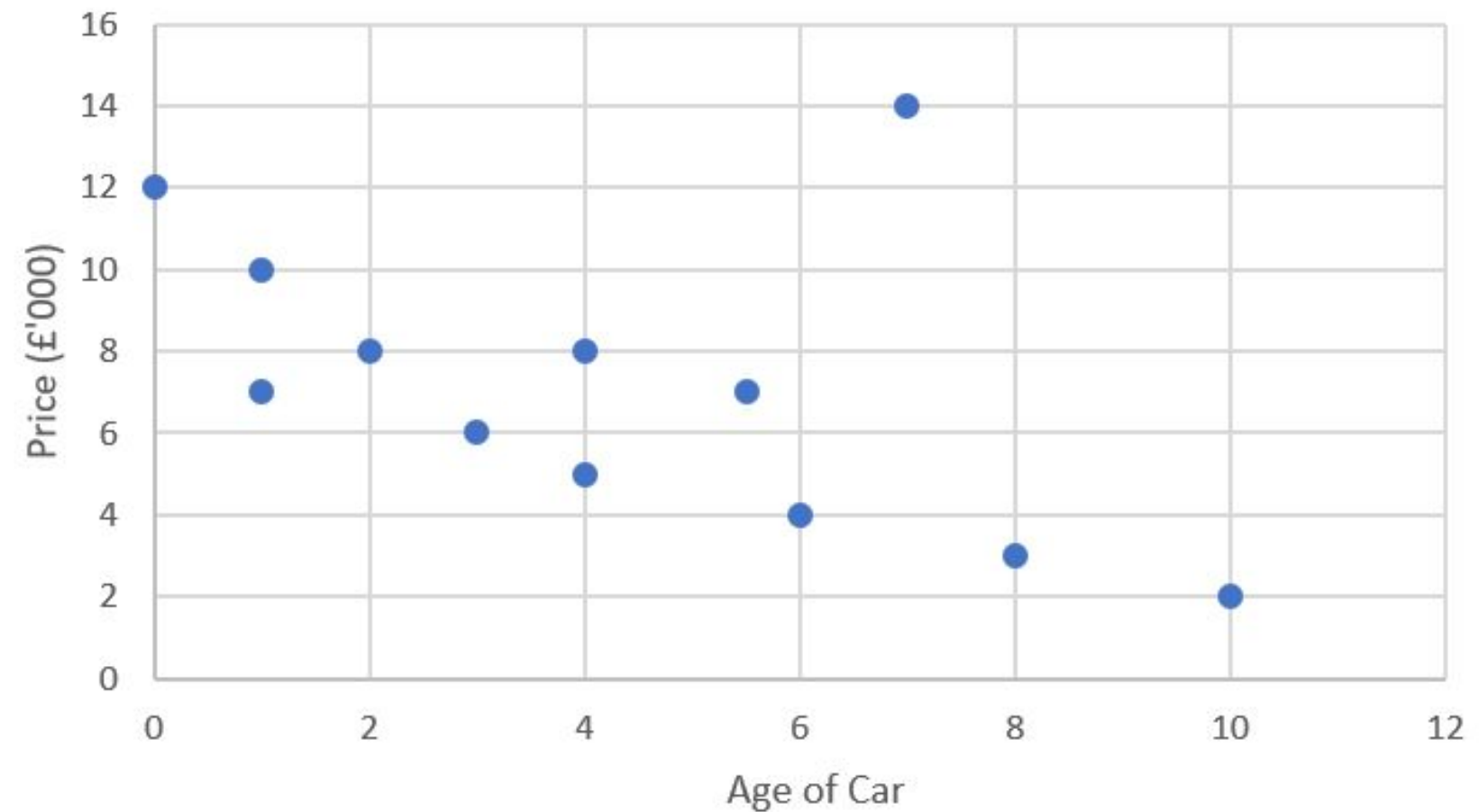
The value of the car decreases as the age increases.



Connect

Representing bivariate data on a scatter graph can help us see connections more easily.

Age of car (years)	Price of car (£ thousands)
0	12
1	10
1	7
2	8
3	6
4	8
4	5
5.5	7
6	4
7	14
8	3
10	2



The scatter graph shows that as the age of car _____, the price _____



Independent task

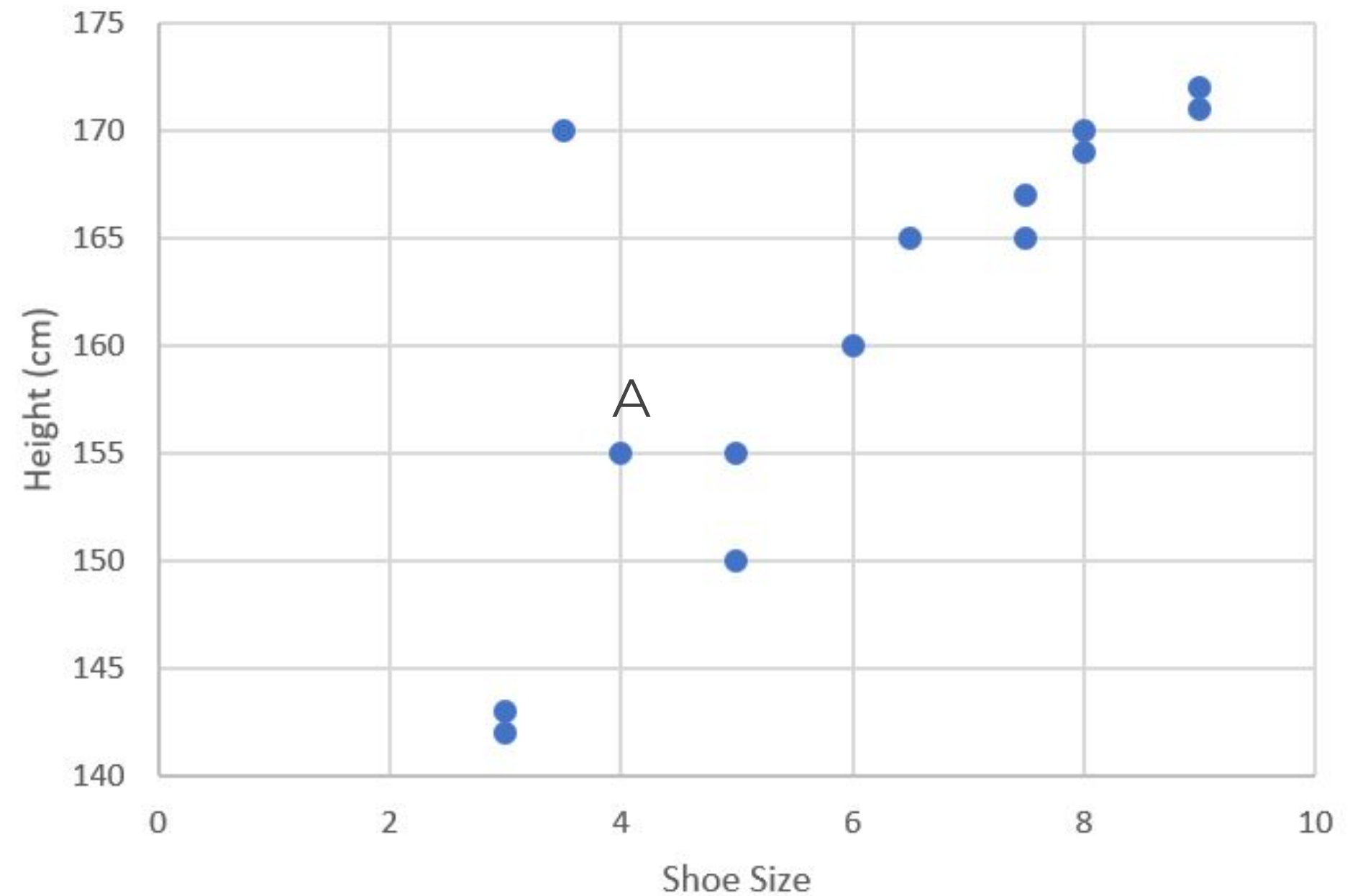
Explain what point A means.

What shoe size does the student who is 160cm tall have?

Which data point is the outlier?

What fraction of the people in this sample have a shoe size of 6 or more?

Write a sentence explaining what this graph is showing.

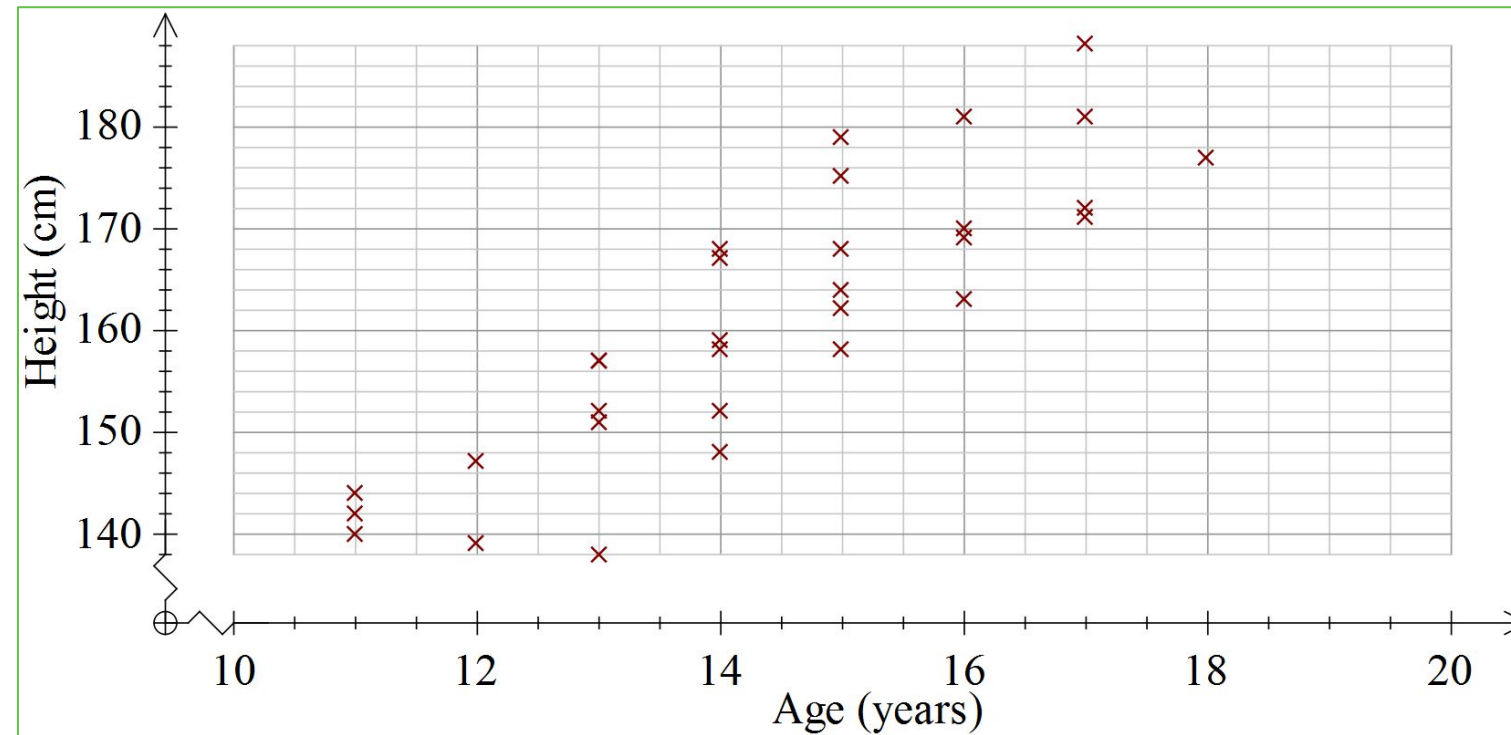


Explore

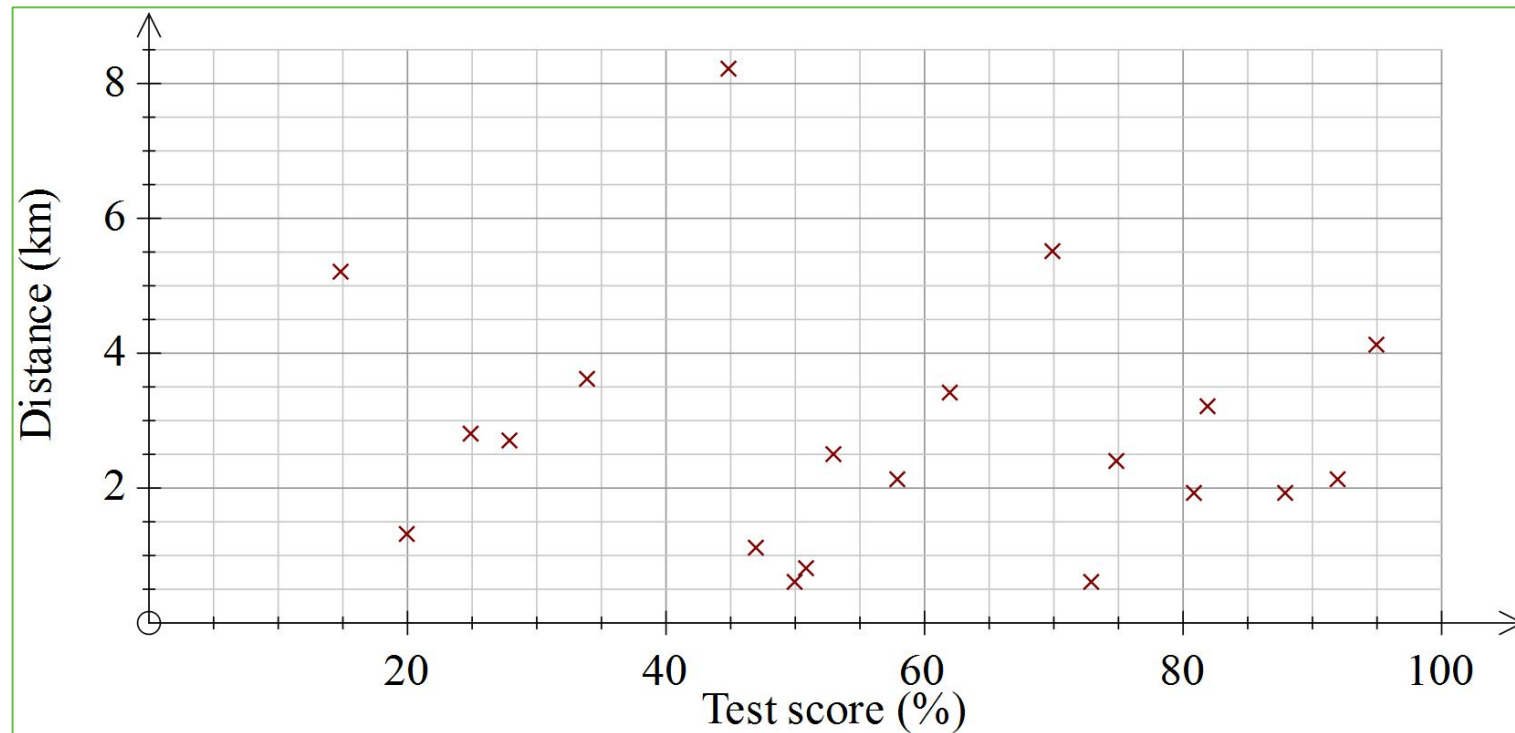
Scatter graphs allow us to see if two variables could be connected.

Which of these scatter graphs show possible connections?

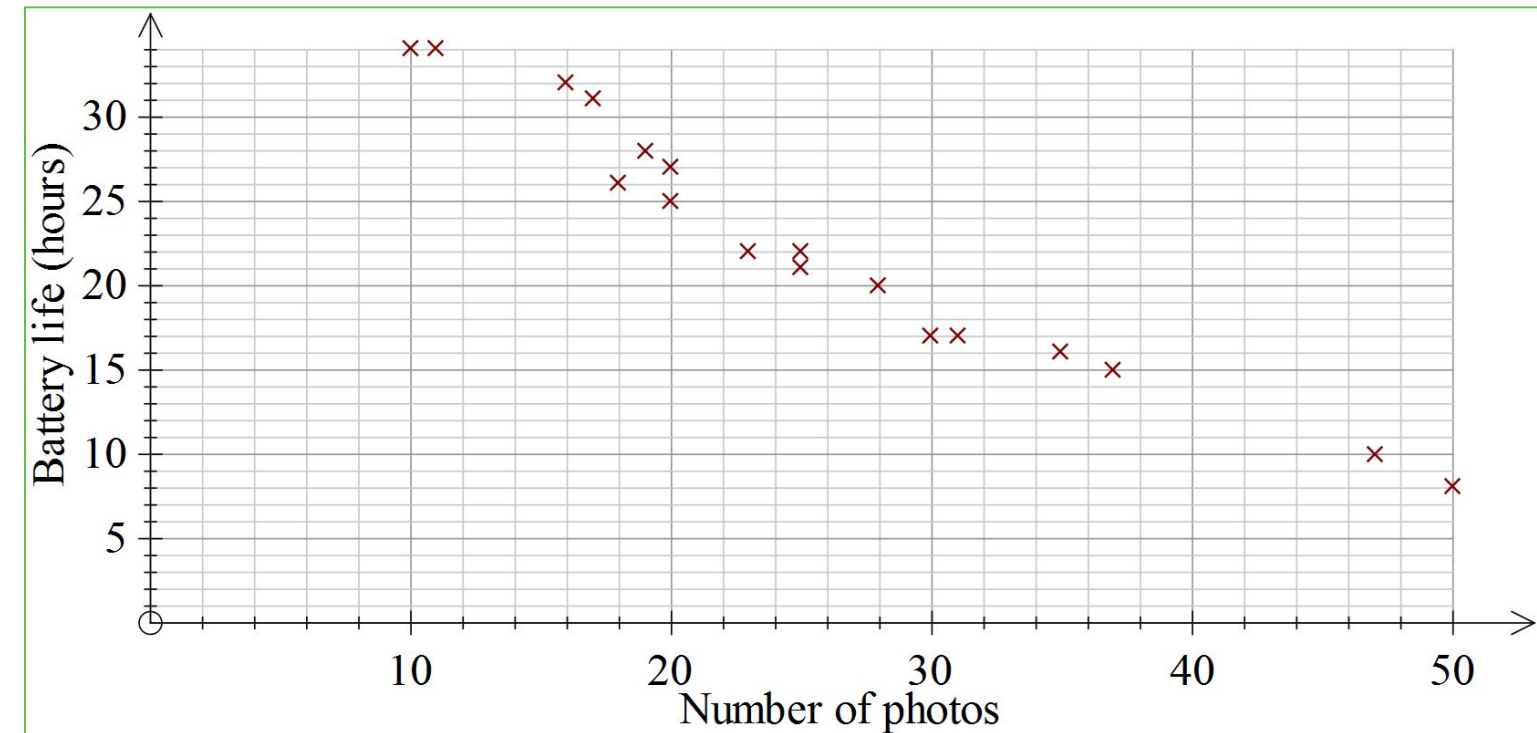
Height and age (secondary students)



Maths test score and how far you can run



Number of photos taken and battery life



Answers



Try this

Are the following statements true or false?

Age of car (years)	Price of car (£ thousands)
1	6
8	4
0	10
3	3
4	4
2	5
2	5
5	4
5	5
7	2

The table gives information on 20 different cars.

False

The two 3s in the table have the same meaning.

False

True

The modal price of a car is £ 5 000.

True

The brand new car costs £6 000 more than the car which is 4 years old.

False

The range of the ages of the cars is 10 years.

False

The cars which cost £4 000 are the same age.

The value of the car decreases as the age increases.

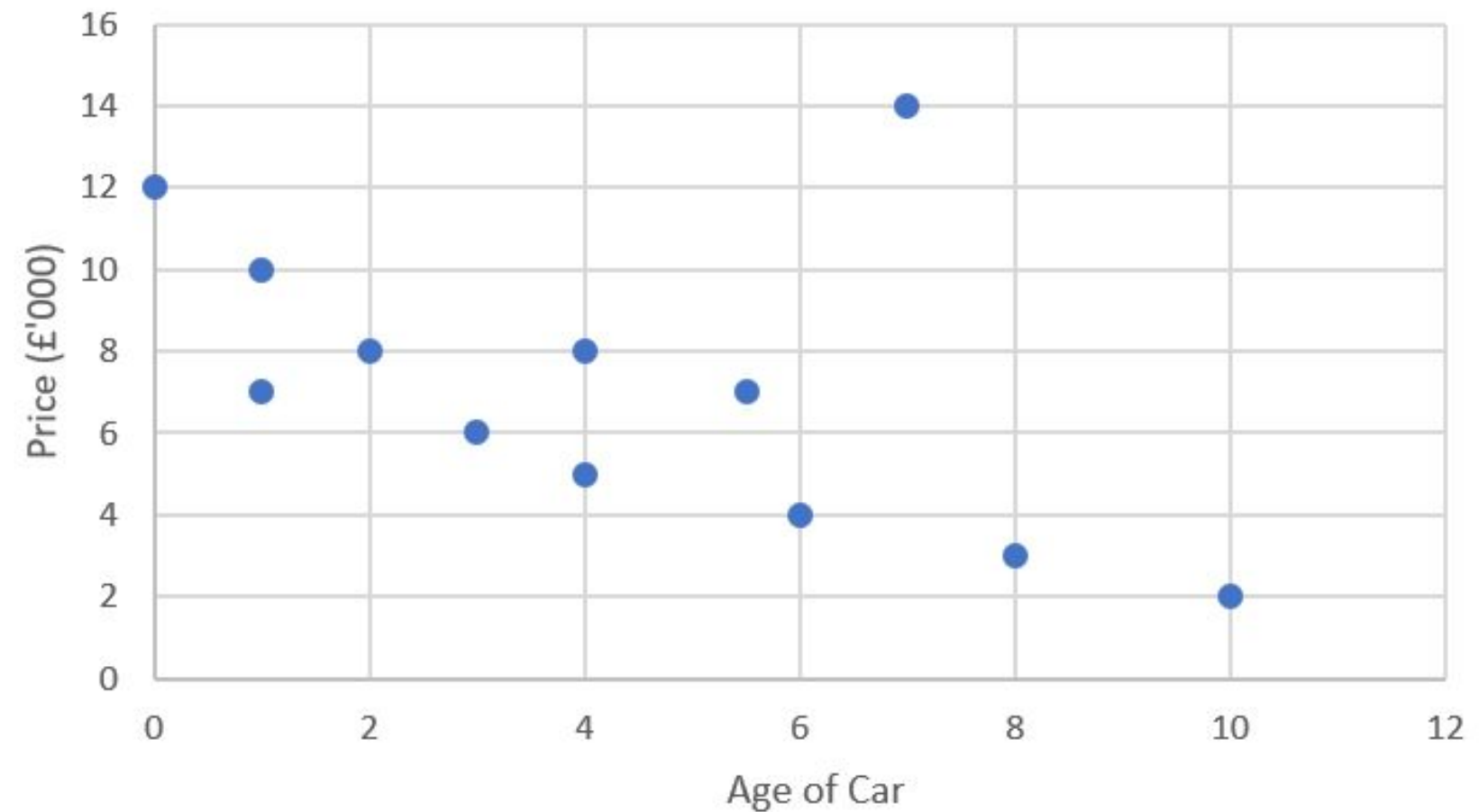
True



Connect

Representing bivariate data on a scatter graph can help us see connections more easily.

Age of car (years)	Price of car (£ thousands)
0	12
1	10
1	7
2	8
3	6
4	8
4	5
5.5	7
6	4
7	14
8	3
10	2



The scatter graph shows that as the age of car **increases**, the price **decreases**.



Independent task

Explain what point A means.

This person has a shoe size of 4 and height of 155cm

What shoe size does the student who is 160cm tall have?

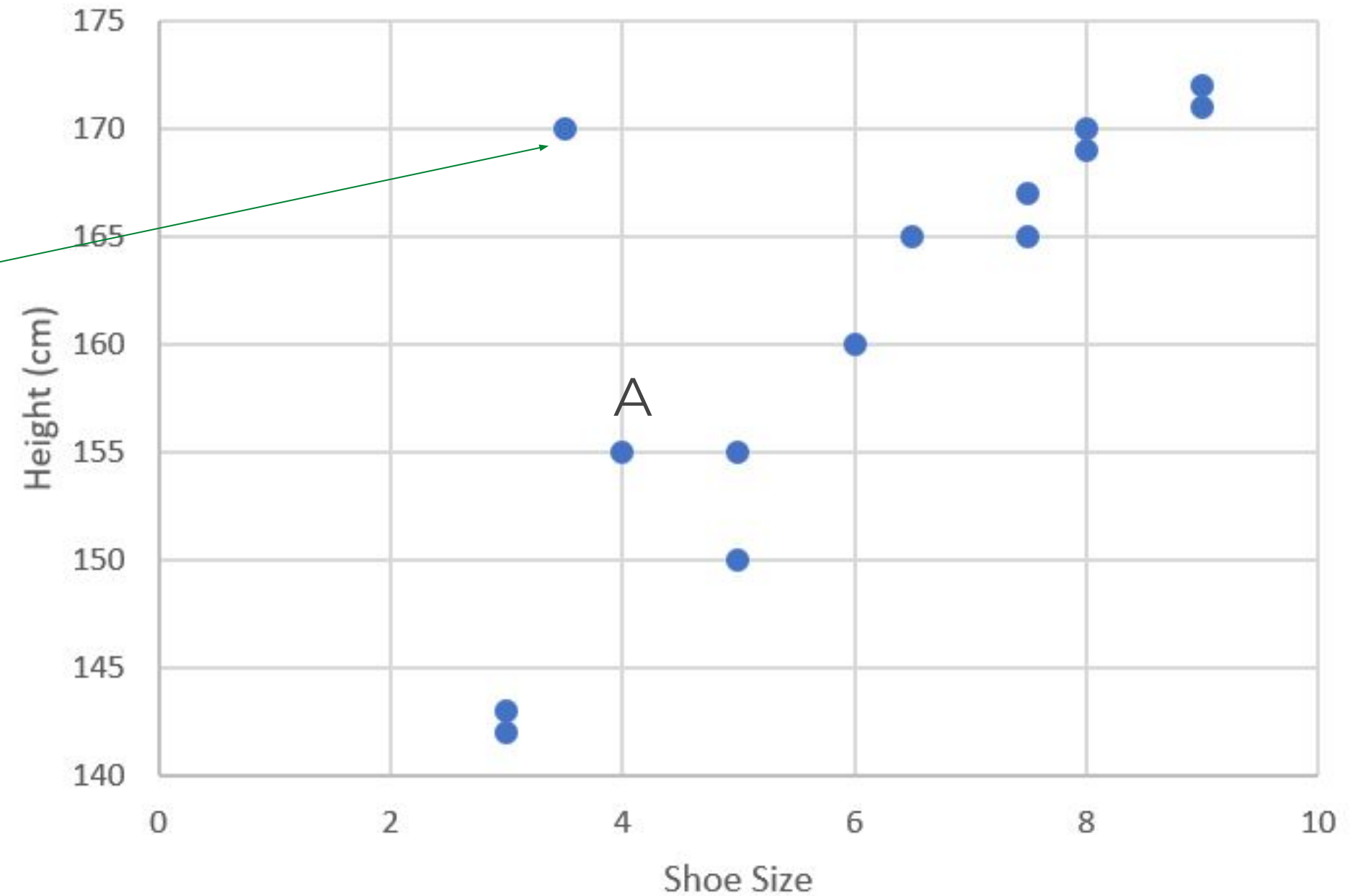
6

Which data point is the outlier?

Write a sentence explaining what this graph is showing.

What fraction of the people in this sample have a shoe size of 6 or more?

8/14



The bigger the shoe size, the bigger the height

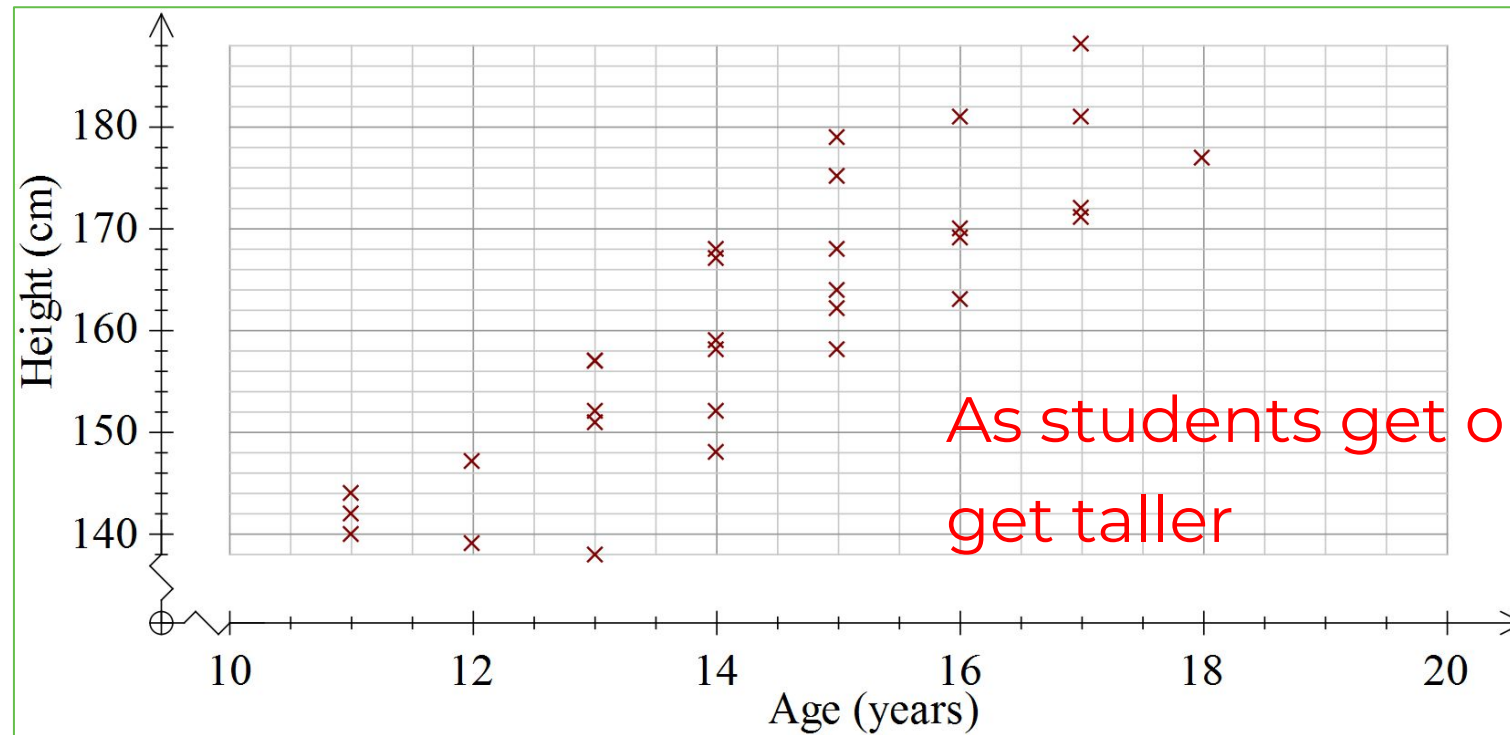


Explore

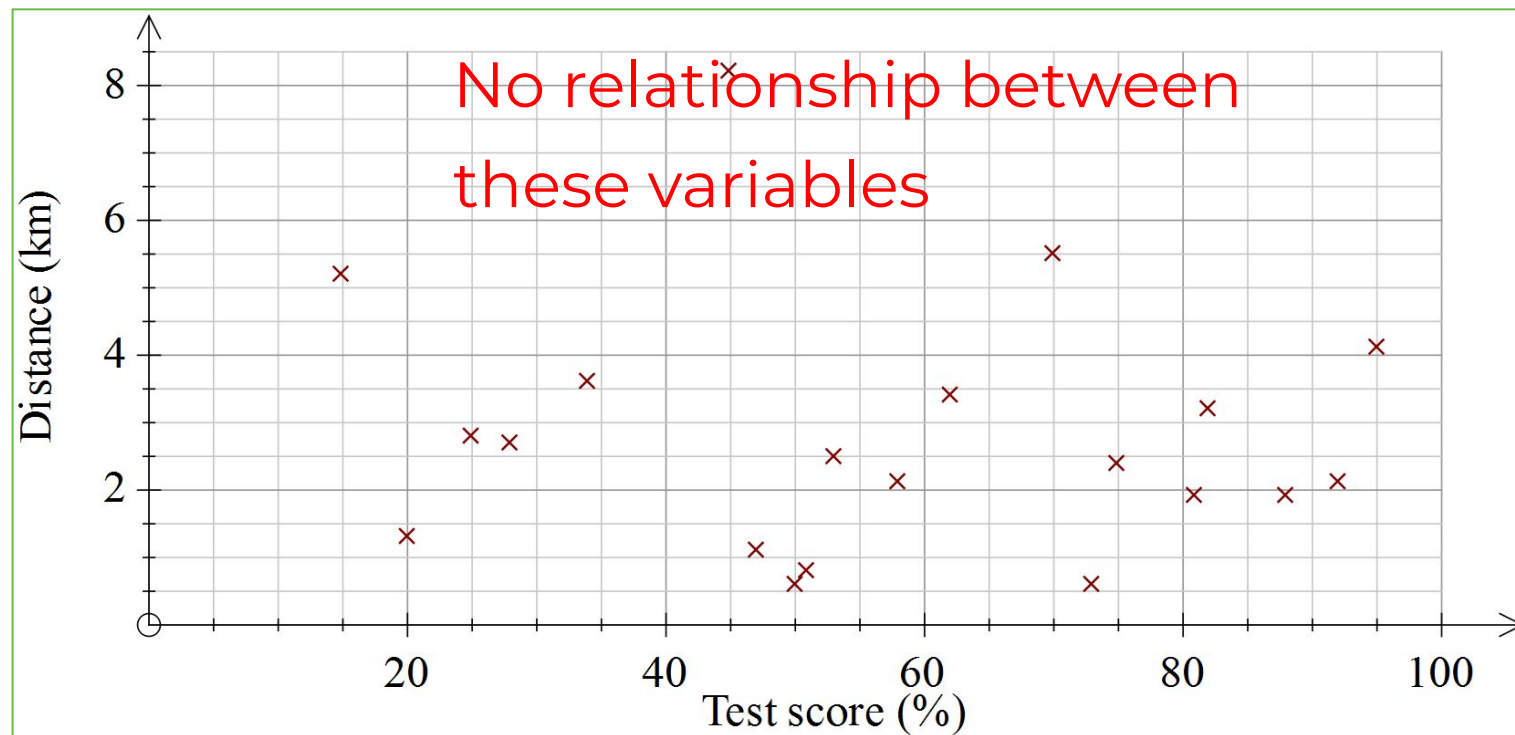
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