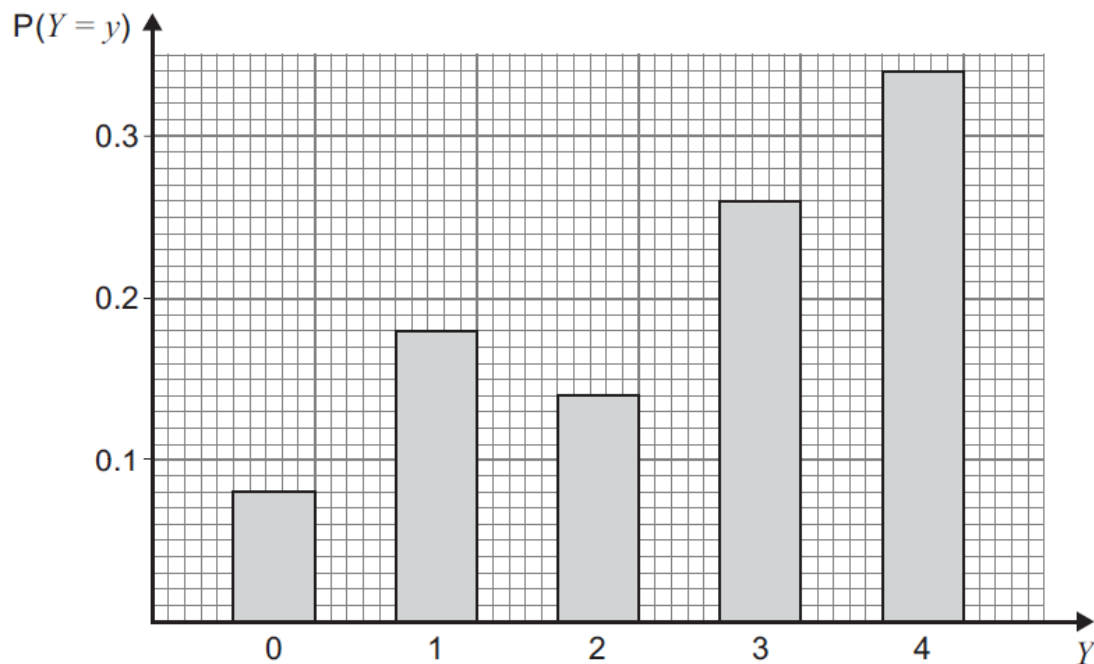


**AQA – Data presentation and interpretation – AS Mathematics P2**1. [June/2021/Paper\\_7356/2/No.13](#)The diagram below shows the probability distribution for a discrete random variable  $Y$ .Find  $P(0 < Y \leq 3)$ .

Circle your answer.

**[1 mark]**

0.40

0.42

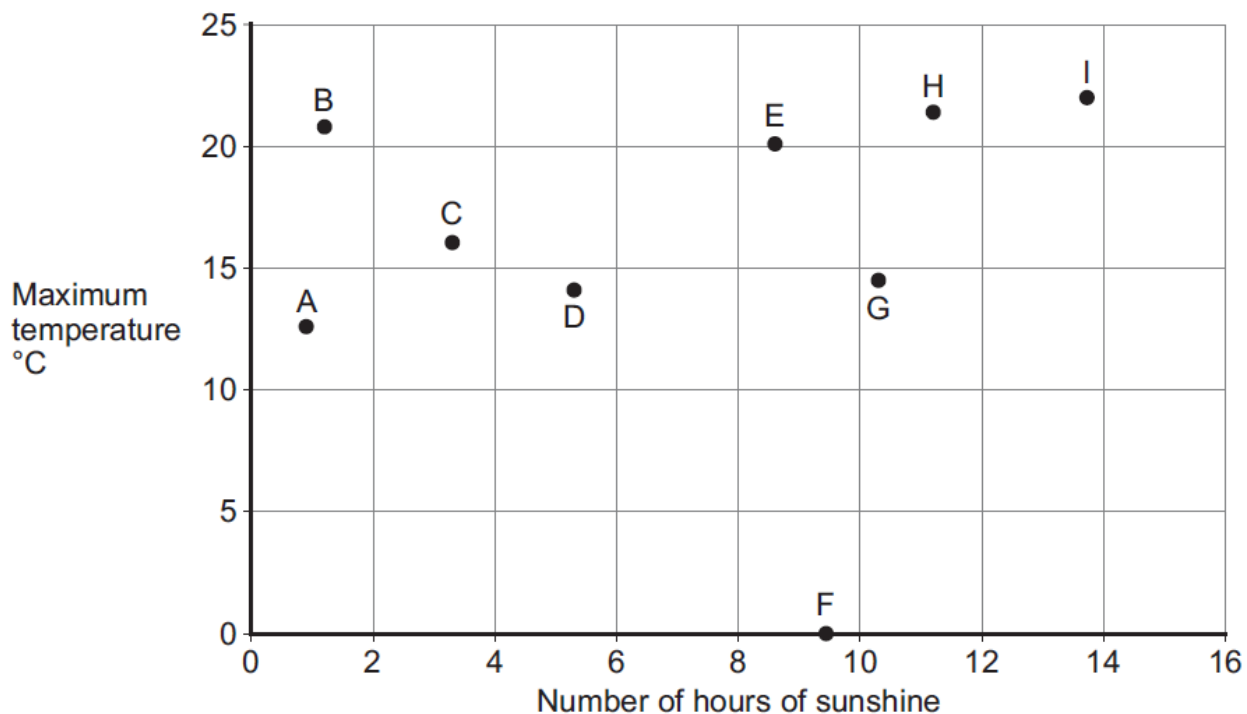
0.58

0.66

**2. June/2021/Paper\_7356/2/No.15**

The number of hours of sunshine and the daily maximum temperature were recorded over a 9-day period in June at an English seaside town.

A scatter diagram representing the recorded data is shown below.



One of the points on the scatter diagram is an error.

**(a) (i)** Write down the letter that identifies this point.

**[1 mark]**

**(a) (ii)** Suggest one possible action that could be taken to deal with this error.

**[1 mark]**

- (b) It is claimed that the scatter diagram proves that longer hours of sunshine cause higher maximum daily temperatures.

Comment on the validity of this claim.

**[1 mark]**

**3. June/2021/Paper\_7356/2/No.16**

An analysis was carried out using the Large Data Set to compare the CO<sub>2</sub> emissions (in g/km) from 2002 and 2016.

The summary statistics for the CO<sub>2</sub> emissions,  $X$ , for all cars registered as owned by either females or males is given in the table below.

	<b>2002</b>	<b>2016</b>
$\sum x$	207 901	142 103
<b>Sample size</b>	1215	1144

- (a) Find the reduction in the mean of the CO<sub>2</sub> emissions in 2016 compared to the mean of the CO<sub>2</sub> emissions in 2002.

[2 marks]

- (b) It is claimed that the move to more electric and gas/petrol powered cars has caused the reduction in the mean CO<sub>2</sub> emissions found in part (a).

Using your knowledge of the Large Data Set, state whether you agree with this claim.

Give a reason for your answer.

[1 mark]

(c) There are 3827 data values in the Large Data Set.

It is claimed that the data in the table above must have been summarised incorrectly.

(c) (i) Explain why this claim is being made.

**[1 mark]**

(c) (ii) State whether this claim is correct.

Give a reason for your answer.

**[1 mark]**