AQA - Tabulation and Representation of data – GCSE Statistics – 2021

1. June/2021/Paper_1F/No.5

   Jack is wondering whether he gets value for money from his subscription to a sports channel.

   He records the number of live football matches he watches for each of the **40** weeks in the season.

   Some of his results are shown in the table.

Number of matches watched in a week		Frequency
0	III	3
1	IIII III	
2	IIII IIII IIII III	18
3		7
4	IIII	4

   (a) Complete the table by filling in the **three** empty cells correctly.

   [3 marks]

   (b) Jack chooses one of the 40 weeks at random.

   (b) (i) What is the probability he chooses a week in which he watched **five** matches?

   [1 mark]

   Answer _____

   (b) (ii) What is the probability he chooses a week in which he watched exactly **two** matches?

   [2 marks]

   _____

   _____

   Answer _____

(b) **(iii)** What is the probability he chooses a week in which he watched at least **three** matches?
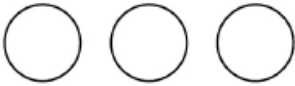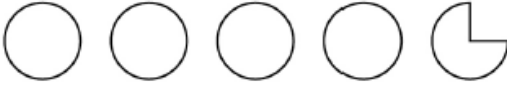
[1 mark]

_____

_____

Answer _____

2. June/2021/Paper_1F/No.6

Ronnie and Lewis are looking for new cushions for their living room.

They record the colour of each cushion they like.

The pictogram shows some of this information.

Key: ◯ represents 4 cushions

(a) How many **more** brown cushions than red cushions do they like?

[2 marks]

_____

_____

Answer _____

(b) They liked 10 different **multi-coloured** cushions.

Complete the pictogram to show this information.

[2 marks]

(c) Assume that they decide to buy one of the cushions represented in the pictogram.

(c) (i) What is the probability that they buy a **white** cushion?

[3 marks]

_____

_____

_____

Answer

(c) (ii) What **other** assumption did you have to make to answer **part (c)(i)**?

[1 mark]

_____

_____

_____

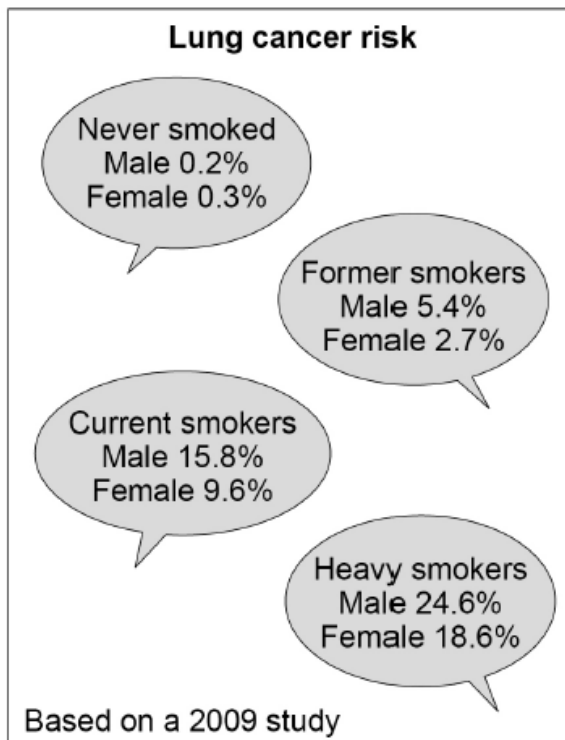**3.** June/2021/Paper_1H/No.7

This picture gives the risk of getting lung cancer and how smoking changes that risk.

Lung cancer risk

Never smoked
Male 0.2%
Female 0.3%

Former smokers
Male 5.4%
Female 2.7%

Current smokers
Male 15.8%
Female 9.6%

Heavy smokers
Male 24.6%
Female 18.6%

Based on a 2009 study

(a) How many out of every 1000 women who have **never smoked** are expected to get lung cancer?

[2 marks]

_____

_____

_____

Answer _____

(b) How many times greater is the risk of getting lung cancer for a man who is a **heavy smoker** compared with a man who has **never smoked**?

[2 marks]

_____

_____

_____

Answer _____

(c) Give **two** reasons why the picture might not be that helpful for someone to estimate their risk of lung cancer now.

[2 marks]

1 _____

_____

_____

2 _____

_____

_____

4. June/2021/Paper_2F/No.2

Which of these is **not** a type of statistical experiment?

Circle your answer.

[1 mark]

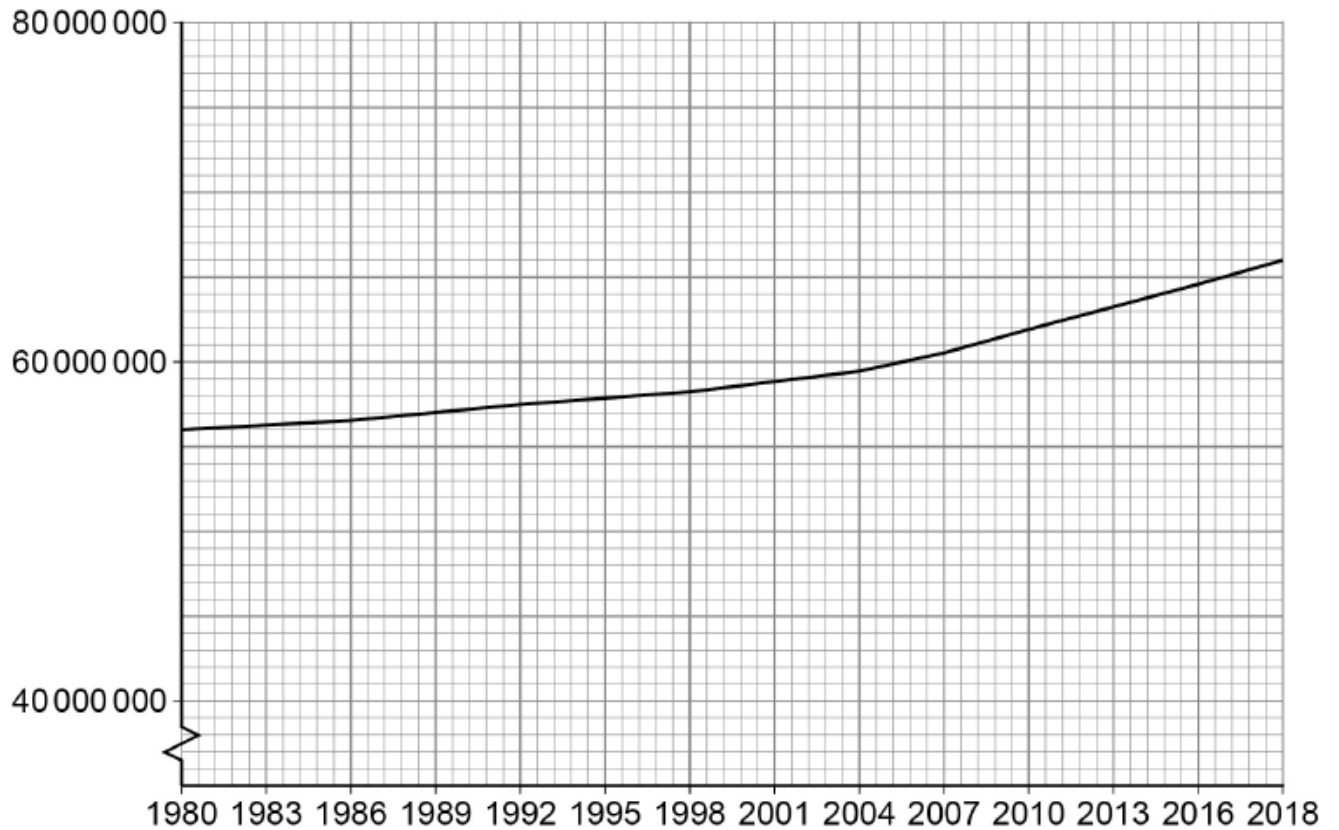field   classroom   laboratory   natural

5. June/2021/Paper_2F/No.5

The graph shows the UK population from 1980 to 2018.

Source: ONS

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(a)   What was the UK population in 2018?

[1 mark]

Answer _____

(b)   Describe the general trend in the UK population during these years.

[1 mark]

_____

_____

(c)   In which year did the UK population reach 60 million?

[1 mark]

Answer _____

6. June/2021/Paper_2F/No.8

For people who voted in the 2019 General Election, the graph shows the percentage of votes for the three main parties for different age groups.

This graph has been removed due to third-party copyright restrictions.

(a) What percentage of voters aged 25–34 voted for the Labour Party?

[1 mark]

Answer _____ %

(b) Which party had the most similar percentage values across the age groups?

[1 mark]

Answer _____

(c) Kez says,

"More people in the 55–64 age group voted Conservative than in the 45–54 age group."

(c) (i) Give a reason why Kez **might** be correct.

[1 mark]

_____

_____

_____

(c) (ii) Give a reason why Kez **could** be wrong.

[1 mark]

_____

_____

_____

(d) Diane says the graph must be wrong as each set of three bars does not add up to 100%.

Is Diane correct?

Tick (✓) a box.

Yes ☐   No ☐
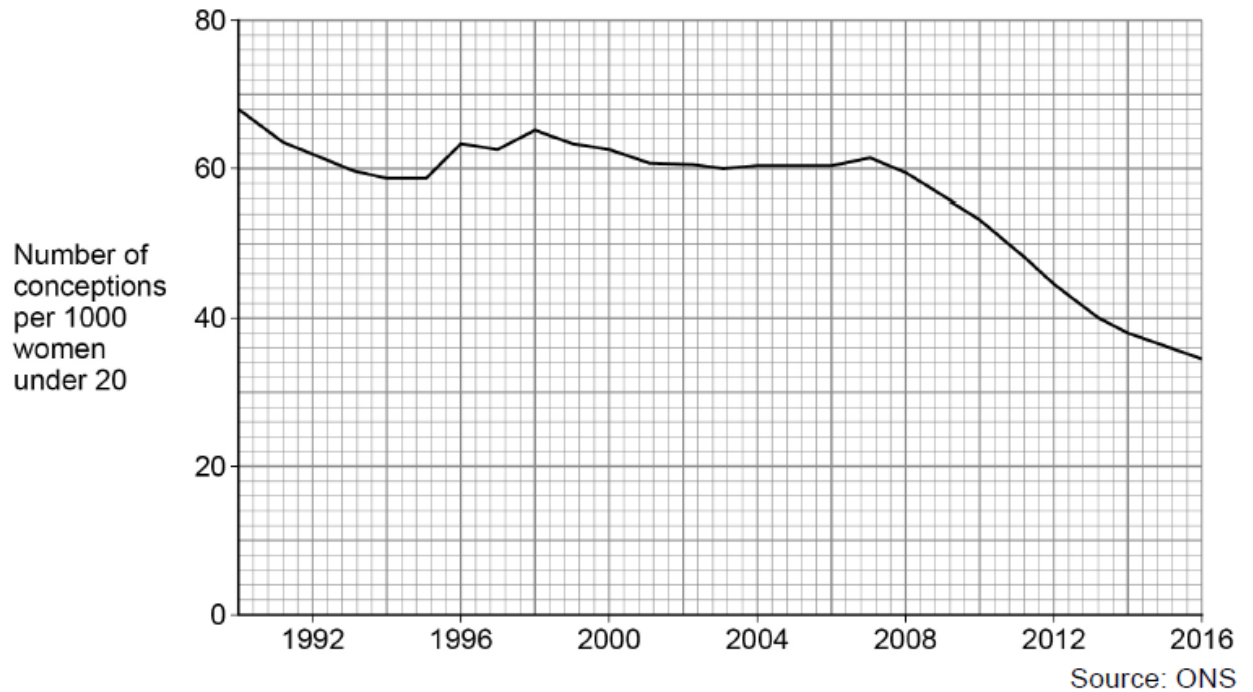
Give a reason for your answer.

[1 mark]

_____

_____

_____

7. June/2021/Paper_2F/No.14

The graph shows the number of conceptions per 1000 women **under 20** in England and Wales.

A conception is when a woman becomes pregnant.

Source: ONS

(a) (i) Make **two** comments about the patterns in the data.

[2 marks]

Comment 1 _____

_____

Comment 2 _____

_____

(a) (ii) Give **one** possible reason for the overall trend in the data.

[1 mark]

_____

_____

(b) Draw lines to connect the statements with whether they are likely to be correct or not.

[2 marks]

Less than 5% of women under 20 became pregnant in 2012	Definitely correct
There were fewer than 40 babies born to women under 20 in 2016	Probably correct
Fewer women **under 21** became pregnant in 2016 compared to 1992	Definitely incorrect

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8. June/2021/Paper_2H/No.4

    Which of these is **not** a characteristic of the Normal distribution?
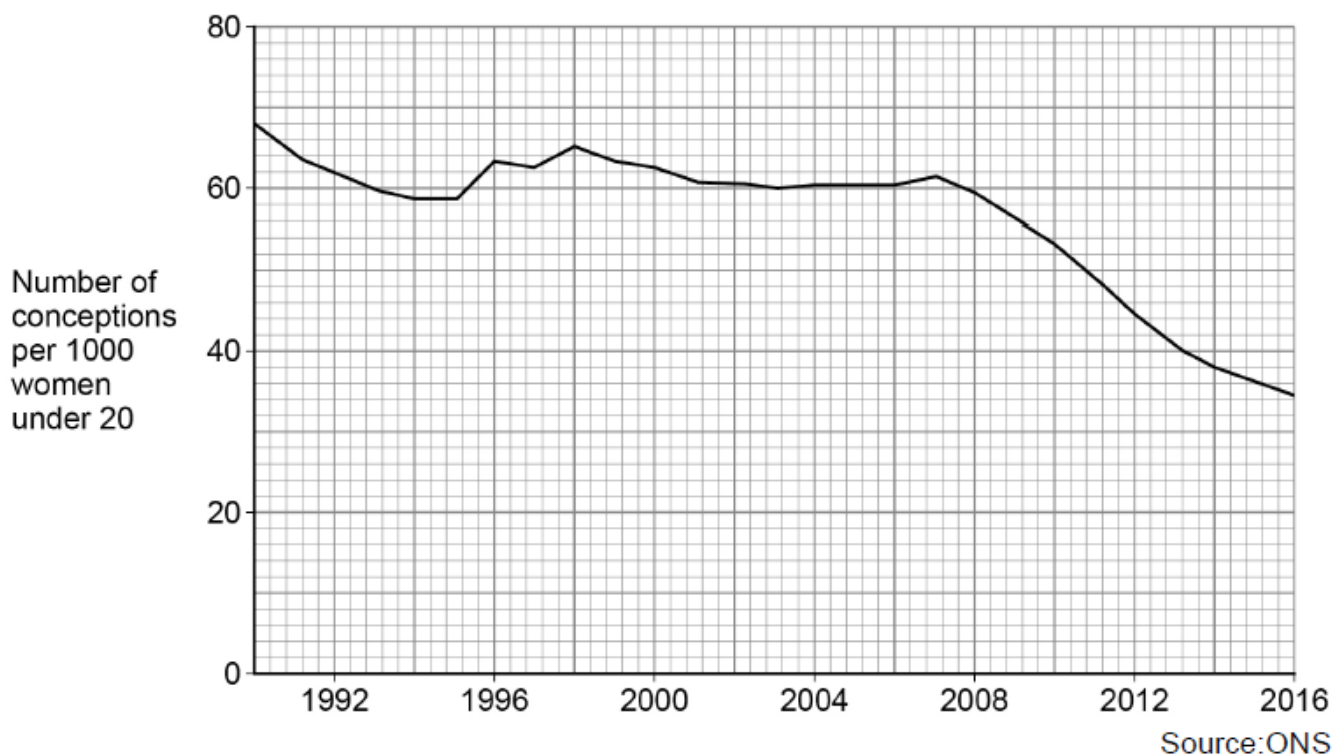
    Circle the letter of your answer.

    [1 mark]

    A   The distribution is symmetric

    B   The distribution is bell-shaped

    C   mean = median = mode

    D   mean = standard deviation

9. June/2021/Paper_2H/No.7

    The graph shows the number of conceptions per 1000 women **under 20** in England and Wales.

    A conception is when a woman becomes pregnant.

    Source:ONS

(a) (i) Make **two** comments about the patterns in the data.

[2 marks]

Comment 1 _____

_____

Comment 2 _____

_____

(a) (ii) Give **one** possible reason for the overall trend in the data.

[1 mark]

_____

(b) Draw lines to connect the statements with whether they are likely to be correct or not.

[2 marks]

Less than 5% of women under 20 became pregnant in 2012	Definitely correct
There were fewer than 40 babies born to women under 20 in 2016	Probably correct
Fewer women **under 21** became pregnant in 2016 compared to 1992	Definitely incorrect