

Name: _____

Exam Style Questions

Random Sampling



Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 282



1. Parker wants to take a random sample of people who live in his street.

(a) Explain what is meant by a random sample.

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(1)

(b) Describe a method Parker could use to take his random sample.

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(1)

2. Gianluca is a farmer.
He has 480 cows.

Gianluca wants to take a random sample of 20 cows.

Describe a method that Gianluca could use

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(1)

3. A call centre has 800 workers.
The building has 20 floors.
Each floor has 40 workers.

Describe a method that could be used to obtain a random sample of 120 workers from the call centre.

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(1)

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4. (a) Explain how you could interview 10 employees randomly from a company of 600 employees.

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(1)

- (b) Paul stood inside the company canteen on a Friday lunchtime and interviewed 10 employees.

Explain why his method will not give a random sample.

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(1)

5. A school has 2000 students.
Explain how you could obtain a random sample of 35 students from this school.

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(1)

6. Explain how you could obtain a random sample of 100 people from a town.

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(1)

7. Describe a method of choosing a random sample of 20 students from a primary school of 141 students.

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(1)

8. (a) Explain what is meant by a random sample.

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(1)

Here is an extract from a table of random numbers

20	17	42	01	72	33	94	55	89	65	58	17
33	74	49	04	27	56	11	63	77	79	90	31
22	15	78	49	05	74	98	97	58	47	10	40
32	70	17	05	79	58	50	26	54	30	01	88
03	64	59	55	85	63	49	46	61	89	33	79

(b) Starting from the first line and second column of the table with the number 17 and reading across the table select and write down 15 random numbers between 01 and 50 from the table.

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(2)

(c) Explain how you could use these random numbers to choose 15 people from from 50 people.

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(2)

9. A music shop owner receives 60 applicants for a job.
He decides to take a random sample of 20% of the applicants to find out how many have a degree.

(a) Describe how this sample could be chosen.

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(2)

The shop owner finds 4 applicants in his sample have a degree.

(b) Use this information to estimate how many of the 60 applicants have a degree

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(1)