

## UNIT 18 *Sampling*

## Overhead Slides

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### **Overhead Slides**

- 18.1 Random Samples
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- 18.3 Systematic Samples
- 18.4 Quota Samples
- 18.5 Stratified Random Samples

## OS 18.1

*Random Samples*

Use the random numbers to select a random sample of 5 pupils from this class:

1	Alan	10	Rachel	19	Sacha	28	Salif
2	Lucy	11	Ben	20	Halim	29	Annie
3	Tom	12	Emma	21	Zola	30	Karen
4	Azar	13	Hannah	22	Joseph		
5	Jayne	14	Grace	23	Anna		
6	Nadina	15	Miles	24	Sophie		
7	Matthew	16	James	25	Kathryn		
8	Sushi	17	Joshua	26	Helen		
9	Milos	18	Lisa	27	Irina		

*Random Numbers*

8 9 4 3	3 8 3 2	4 3 8 2	2 1 6 5
4 9 2 5	2 5 6 6	5 2 0 5	7 2 5 9
7 0 5 7	1 6 1 8	0 3 9 0	6 7 4 7
8 9 2 3	9 6 5 6	8 3 2 1	7 7 3 2
8 5 5 7	6 6 3 5	9 2 2 9	0 8 8 6

## OS 18.2

## *Non-Random Samples*

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Explain why each of the following would *not* produce a random sample.

1. Taking the views of the first 10 customers in a supermarket queue.

2. Selecting 10 people at random from the names listed in a telephone directory.

3. Selecting 10 people at random from the electoral register.

4. Selecting the mothers of the first 10 children arriving at school.

**OS 18.3***Systematic Samples*

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Two systematic samples are to be taken from the group of people below.

*Sample A* has size 3.

*Sample B* has size 4.

<i>Name</i>	<i>Sample A</i>	<i>Sample B</i>
Anna		
Eli		
Hannah		
Nicholas		
Stephanie		
Rosin		
Joshua		
Ben		
Isaac		
Annie		
Jamil		
Matthew		

## OS 18.4

*Quota Samples*

A garage has 480 regular customers. The cars that they own are shown in the table.

Ford	80
Vauxhall	120
Renault	40
Peugeot	160
Other	80

How many owners of each type of car should be included in a quota sample of size 48 ?

Ford	
Vauxhall	
Renault	
Peugeot	
Other	

## OS 18.5

*Stratified Random Samples*

The girls in a group are:

1	Clare	4	Greta	7	Robin
2	Kate	5	Sophie	8	Irina
3	Rachel	6	Erika	9	Mollie

The boys in a group are:

1	Tom	4	Erik
2	Tim	5	Simon
3	Jamil	6	Ben

Select a *stratified random sample* of size 5 from the group, using the random numbers below.

No. of girls needed =       No. of boys needed =

4 7 2 7      9 4 1 4      3 3 9 0      1 9 0 5

9 4 3 7      7 5 1 0      7 4 0 5      1 8 7 2

3 8 9 7      8 9 5 8      6 4 8 1      9 4 0 3