

FREQUENCY





Unit 5: Quantitative Techniques for Business

THE HUMAN BRAIN





The human brain finds it difficult to make sense of a large quantity of data, however once it is organised and presented, a large amount of information can be derived from it.

DATA CLASSIFICATION

Qualitative

-  Qualitative data is data which is not numerically significant.
 -  colour of cars
 -  feelings about a new product
 -  taste

Quantitative


-  Quantitative data is data which is expressed in numerical terms
 -  number of hours worked
 -  amount spent
 -  cups of coffee drunk

DATA CLASSIFICATION


Continuous Data

-  data that is measured on an interval scale (such as length or weight)

Discrete Data

-  whole values (obtained by counting)


Ordinal Data







-  given a numerical value but only for comparative purposes (giving a score between 1 and 10).

Categorical Data

-  no numerical value (such as choice of newspaper)

DATA CLASSIFICATION

 How would you define the following?:

-  heights of checkout operators
-  choice of summer fruit
-  sales of summer fruit per day
-  weekly earnings by employees in Asda
-  number of shoppers per day at Tesco
-  market research survey into consumer reaction to a new product



METHOD OF TRAVEL

Person	Mode of Travel	Person	Mode of Travel	Person	Mode of Travel	Person	Mode of Travel
1	car	6	car	11	bus	16	car
2	car	7	cycle	12	car	17	car
3	bus	8	bus	13	walk	18	car
4	walk	9	train	14	walk	19	bus
5	cycle	10	walk	15	cycle	20	car

TABULATION OF DATA


Mode of Travel	Frequency	Relative Frequency
Car	8	40%
Bus	4	20%
Walk	4	20%
Cycle	3	15%
Train	1	5%

GROUPING

Ungrouped

 all numbers are included to measure the frequency


Grouped

 intervals are used to measure the frequency

CLASS BOUNDARY

 class boundaries and intervals

 these should be a convenient number such as 10,20, 25

 for example with a data range of 100 to 298 you could have 100-119, 120-129, 130-139, 140-149 and so on...

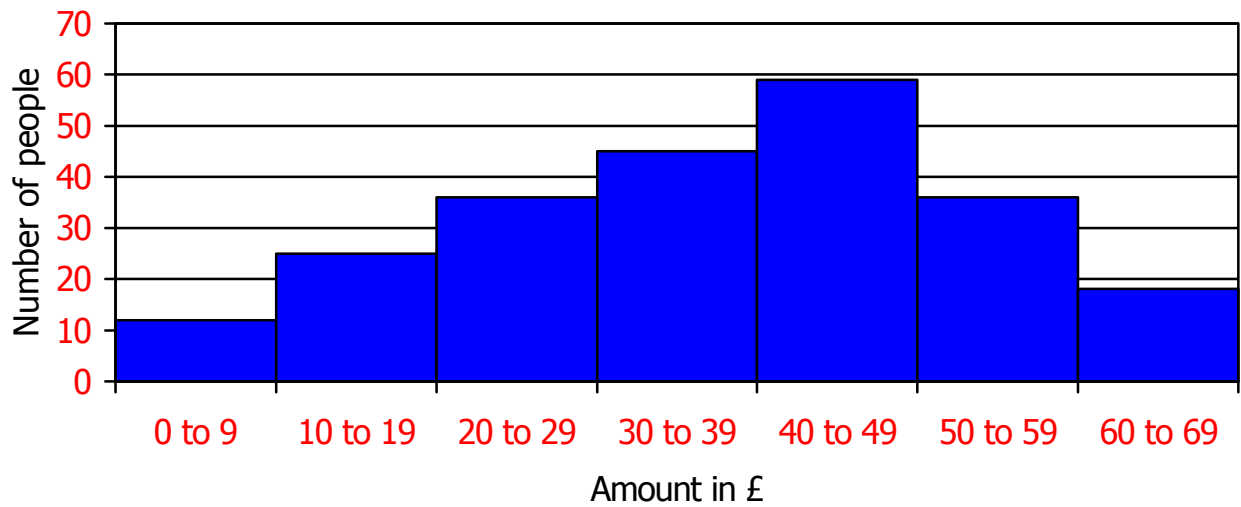
IRREGULAR INTERVALS

A histogram is a variation of a bar chart in which it is the area (not the height) which represents the frequency. With regular class intervals the height is directly proportional to the class frequency, with irregular intervals (e.g. age) it may be appropriate to increase class widths.



REGULAR INTERVALS

Money Spent at Tesco



IRREGULAR INTERVALS

Daily Sales (£)	No. of Stores
Up to 1,999	10
2,000-3,999	40
4,000-7,999	100
8,000-11,999	120
12,000-19,999	60

