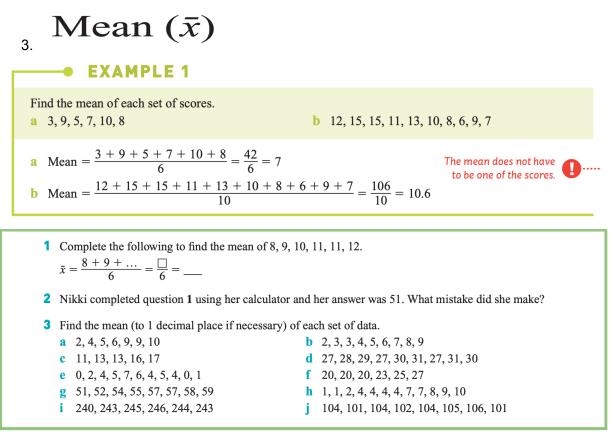
WALT calculate different types of averages

Success Criteria I know different averages such as mean, Median and Mode have a different ways of calculating.

In statistics, it is referred to as a measure of central tendency.

- 1. We will first be examining the mean. The mean can only be calculated from Numerical data
- 2. The symbol for the mean is



Finding Mean using Frequency Distribution Tables

Extension Work on the next page - Group three practice a few examples from the work above and then proceed to the distribution table work.

Find th	Find the mean of the scores given in this frequency distribution table.							
Scor	e	4	5	6	7	8		
Freq	uency	3	2	4	8	6		

For simplicity, use x for the values of the scores and f for the frequencies. Add an $f \times x$ column to the table.

Score (x)	Frequency (f)	$f \times x$	
4	3	$3 \times 4 = 12$	This is the sum of all the 4s.
5	2	$2 \times 5 = 10$	This is the sum of all the 5s.
6	4	$4 \times 6 = 24$	This is the sum of all the 6s.
7	8	$8 \times 7 = 56$	This is the sum of all the 7s.
8	6	$6 \times 8 = 48$	This is the sum of all the 8s.
	$\Sigma f = 23$	$\Sigma fx = 150$	This is the sum of all the 4s, 5s, 6s, 7s and 8s.

 Σf = the sum of the frequencies = the total number of scores = 23

$$\Sigma fx =$$
 the sum of the subtotals 12, 10, 24, 56 and 48

= the sum of all the scores = 150

:. Mean $(\bar{x}) = \frac{\text{sum of all scores}}{\text{number of scores}} = \frac{150}{23} = 6.5$ (to 1 decimal place)

5 a Complete this frequency distribution table.b Calculate the mean, correct to 1 decimal place.

Score (x)	Frequency (f)	$f \times x$
8	6	48
9	8	
10	15	
11	11	121
12	3	
	$\Sigma f =$	$\Sigma f x =$

The Greek letter Σ is used

to mean the 'sum of'.

D.....

6 a Complete this frequency distribution table.b Calculate the mean, correct to 1 decimal place.

Score (x)	Frequency (f)	$f \times x$
18	3	
19	5	95
20	10	
21	15	
22	8	
23	1	
	$\Sigma f =$	$\Sigma f x =$

7 For each of the following frequency distribution tables:i Copy the table and add an *fx* column.

					-		
a	x	13	14	15	16	17	
	f	2	3	6	4	1	
c	x	50	51	52	53	54	55
	f	3	5	8	6	2	4

ii Calculate the mean.

b	x	2	3	4	5	6
	f	4	6	5	3	2
d	x	18	19	20	21	22
	f	12	28	25	26	9