GCSE - Numeracy and Mathematics Topic: Averages from tables	Tier: Intermediate	Grade: C

Starter:
Calculate the mode, median and mean for the following numbers:
8, 12, 13, 7, 10 ,15, 10, 13

Top Tips! Learn how to calculate the three averages

Mode: The number or group that appears most often

Median: The number in the middle when the data is in order (if there's two numbers in the middle, add them up, then halve them)

Mean: Add to get the total, then divide with the numer of values (you'll nedd to use the midpoint to estimate the mean if the data is grouped)

Skills:

1. The table shows the number of pupils in all the form classes in a school:

Disgyblion	Amlder
25	4
26	6
27	7
28	2
29	3

a) How many classes are there in the school?
b) Calculate the mean and the mode.

2. The table shows themaths test results of 8C

Marc(m)	Amlder
0 < m ≤ 20	1
20 < m ≤ 40	3
40 < m ≤ 60	11
60 < m ≤ 80	8
80 < m ≤ 100	2

Estimate the mean mark:

Examination Question:

2015 January Link - Applications U1 Higher Qu 4 (a) (i) a (ii)

A broadcasting company, *Stateside3*, investigated television-viewing habits.
The table below shows the number of minutes 80 people spent watching television last Wednesday.

Amser (t munud)	Amlder
0 < m ≤ 90	10
90 < m ≤ 180	38
180 < m ≤ 270	20
270 < m ≤ 450	8
450 < m ≤ 810	4

Did any of these people spend longer than 15 hours watching television last Wednesday?
Give a reason for your answer. [1]

Calculate an estimate for the mean time these people spent watching television last
Wednesday. [4]

Assessment for Learning

Video / QR code

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Starter:
Calculate the mode, median and mean for the following numbers:
8, 12, 13, 7, 10 ,15, 10, 13

Mode = 10 a 13

Median = 11

Mean = 88 ÷ 8 = 11

Top Tips! Learn how to calculate the three averages

Mode: The number or group that appears most often

Median: The number in the middle when the data is in order (if there's two numbers in the middle, add them up, then halve them)

Mean: Add to get the total, then divide with the numer of values (you'll nedd to use the midpoint to estimate the mean if the data is grouped)

Skills:

3. The table shows the number of pupils in all the form classes in a school:

Disgyblion	Amlder
25	4
26	6
27	7
28	2
29	3

c) How many classes are there in the school?
4 + 6 + 7 + 2 + 3 = 22

d) Calculate the mean and the mode.
Mean = $\frac{(25\times4)+(26\times6)+(27\times7)+(28\times2)+(29\times3)}{22}$
= 26. 7 (1.ll.d)
Mode = 27

4. The table shows themaths test results of 8 Cenin

Marc(m)	Amlder
0 < m ≤ 20	1
20 < m ≤ 40	3
40 < m ≤ 60	11
60 < m ≤ 80	8
80 < m ≤ 100	2

Estimate the mean mark:

Remember to use the mid point of the group:
$\frac{(10\times1)+(30\times3)+(50\times11)+(70\times8)+(90\times2)}{25}$
= 55.6

Examination Question:

2015 January Link - Applications U1 Higher Qu 4 (a) (i) a (ii)

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450 < m ≤ 810	4

Did any of these people spend longer than 15 hours watching television last Wednesday?
Give a reason for your answer. [1]

No as 810 minutes is less than 15 hours (900 minutes).

Calculate an estimate for the mean time these people spent watching television last
Wednesday. [4]

Remember to use the mid point of the group:
$\frac{(45\times10)+(135\times38)+(225\times20)+(360\times8)+(630\times4)}{80}$

= 193.5

Assessment for Learning

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