Handling Data/Statistics GCSE Higher (Range of tasks!) – www.m4ths.com

Section 1 – Finding an mean or estimated mean from tables

Find a mean or estimated mean for each table below stating whether it's the actual or an estimated mean

Number of Goals	Frequency	Frequency x goals
0	12	
1	6	
2	4	
3	8	
4	10	

Height in cm	Frequency	Frequency x midpoint
$0 < h \leq 10$	3	
$10 < h \leq 15$	3	
$15 < h \leq 25$	7	
$25 < h \leq 35$	6	
$35 < h \leq 50$	1	

Section 2 – Doing everything with one table!

For each table below:

1. Complete the table.
2. Find an estimated mean and explain why it's an estimate.
3. Draw a cumulate frequency curve.
4. Draw a box plot.
5. Find the range, estimates for the median, lower quartile, upper quartile and IQR.
6. Draw a histogram to represent the data.
7. Draw a frequency polygon (These are plotted as straight lines taking the midpoint of each interval.
8. Draw a fully labelled pie chart.

(1) Worms – Min length = 3cm and max length = 49cm

Length of worms (cm)	Frequency	Cumulative frequency	Frequency density	Midpoint of class	Frequency × midpoint
$0 < h \leq 5$	1				
$5 < h \leq 15$	9				
$15 < h \leq 30$	2				
$30 < h \leq 45$	3				
$45 < h \leq 50$	5				

(2) Plants – Smallest plant = 10.1cm and largest plant was 5 times bigger than the smallest

Height of plants (cm)	Frequency	Cumulative frequency	Frequency density	Midpoint of class	Frequency × midpoint
$5 < h \leq 15$	32				
$15 < h \leq 20$	15				
$20 < h \leq 30$	13				
$30 < h \leq 45$	28				
$45 < h \leq 60$	12				

(3) Frogs – smallest frog was 9 times smaller than the largest. The largest was 11.4

Height of frogs (cm)	Frequency	Cumulative frequency	Frequency density	Midpoint of class	Frequency × midpoint
$0 < h \leq 1$			18		
$1 < h \leq 3$		20			
$3 < h \leq 6$					18
$6 < h \leq 10$					96
$10 < h \leq 12$		60			