Splitting the Steps: Estimated mean from a grouped frequency table

Question 1

Weight (in grams)	Frequency (f)	Midpoint (m)	Working out (m×f)
20≤w<30	5	25	5 × 25=
30≤w<40	7	35	7 × 35 =
40≤w<50	10	45	10 × 45 =
50≤w<60	6	55	6 × 55 =
Total	①		②

a) Complete the working out
b) Fill in the totals at ① and ②
c) Calculate the estimated mean: ②÷① = _____ ÷ _____ = _____
d) Round your answer to 1dp: _____

Question 2

Distance (in km)	Frequency (f)	Midpoint (m)	Working out (m×f)
0≤d<12	1		1 × =
12≤d<24	4		4 × =
24≤d<36	11		11 × =
36≤d<42	5		5 × =
Total	①		②

a) Find the midpoints
b) Complete the working out
c) Fill in the totals at ① and ②
d) Calculate the estimated mean: ②÷① = _____ ÷ _____ = _____
e) Round your answer to 1dp: _____

Question 3

Height of children (in cm)	Frequency (f)	Midpoint (m)	Working out (m×f)
110≤h<120	2		× =
120≤h<130	8		× =
130≤h<140	4		× =
140≤h<150	1		× =
Total	①		②

a) Find the midpoints
b) Complete the working out
c) Fill in the totals at ① and ②
d) Calculate the estimated mean: ②÷① = _____ ÷ _____ = _____
e) Round your answer to 1dp: _____

Extension

Calculate the estimated mean from this table

Goals (per month)	Frequency (f)	Midpoint (m)	Working out (m×f)
0≤g<5	13		
5≤g<10	4		
10≤g<15	0		
15≤g<20	1		
Total			

GCSE Questions

Q1. Anita picked 50 apples and weighed them. The results are summarised in the table below.

Weight (w grams)	Frequency
$60 \leq w < 100$	13
$100 \leq w < 140$	20
$140 \leq w < 180$	11
$180 \leq w < 220$	6

Calculate an estimate of the mean weight of these apples.

.... g

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Q2. One day, 50 people used the sports club.
This table shows a summary of the times they spent there.

Time (h minutes)	Frequency
$0 < h \leq 30$	5
$30 < h \leq 60$	9
$60 < h \leq 90$	20
$90 < h \leq 120$	10
$1200 < h \leq 150$	6

Calculate an estimate of the mean time spent at the club.

.... minutes