Advanced Averages

i. **A pupil at a school conducts a survey, collecting the ages of 20 people on a bus. The results are given below:**

Age	Frequency (f)	Midpoint (m)	$f \times m$
$0 - 9$	2		
$10 - 19$	5		
$20 - 29$	3		
$30 - 39$	3		
$40 - 49$	4		
$50 - 59$	3		
Total		-	

- Complete the table by filling in the two missing columns and the totals row.

- What is the mean age of the people on the bus?

- What is the modal group of ages?

ii. **The table below shows the results of a science experiment, grouped by temperature:**

Temperature	Frequency (f)	Midpoint (m)	$f \times m$
$0 \leq x < 5$	2		
$5 \leq x < 10$	6		
$10 \leq x < 15$	8		
$15 \leq x < 20$	4		
Total		-	

- Complete the table by filling in the two missing columns and the totals row.

- What is the mean temperature in the results?

- What is the modal group of temperatures?

iii. **The table below shows the number of visitors to a museum over a year:**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Visitors	650	800	775	950	1050	1125	1250	1450	1375	1100	950	775

Using the data above, calculate a 6-month moving average of the number of visitors to the museum.