Exercise 1

Paper 1 style · No calculator

1 5 marks SL 4.3 ●○○ Routine

The number of goals scored by a team in each match of a season is shown below.

goals	0	1	2	3	4
frequency	4	6	k	3	2

The mean number of goals is 1.75.

(a) Find the value of k. **[3]**

(b) Find the median number of goals. **[1]**

(c) Write down the mode. **[1]**

The markscheme is on the next page: try the question first. Written and verified by a practising IB mathematics teacher, produced with AI assistance; solved twice and recomputed by software. Not affiliated with or endorsed by the International Baccalaureate Organization.
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MARKSCHEME (a)

$\frac{0+6+2k+9+8}{15+k} = 1.75$ **M1A1**

$23+2k = 26.25+1.75k,\ k = 13$ **A1**

Total 3 marks

Note M1 for $\frac{\sum fx}{\sum f}$; A1 for the correct equation.

MARKSCHEME (b)

2 **A1**

Total 1 mark

Note 28 matches: the 14th and 15th values are both 2.

MARKSCHEME (c)

2 **A1**

Total 1 mark