

1	(a)		$160 < h \leq 170$	B1	correct class interval
	(b)		Line segments joining the points (135, 4), (145, 11), (155, 24), (165, 22) and (175, 19)	C2 [C1]	for fully correct frequency polygon for points plotted correctly at midpoints of intervals OR joining points with line segments at the correct heights and consistent within the intervals (including end values) OR correct frequency polygon with one point incorrect OR correct frequency polygon with first and last point joined]  NB: ignore any histogram drawn and any part of frequency polygon outside range of first and last points plotted

2	(a)	$40 < h \leq 50$		B1	accept 40 – 50 oe	
	(b)	polygon drawn (15,7), (25,13) (35,14), (45,12) (55,16), (65,18)		B2  (B1)	for fully correct polygon with points plotted at the midpoints  for points plotted correctly but not joined by straight lines  or joining points at correct heights consistently within intervals including plotting at end values  or correct frequency polygon with one point incorrect  or correct frequency polygon with first and last points joined directly)	Joining must be with line segments  for example, at 10, 20, 30,...or at 20, 30, 40,...  Ignore any histogram drawn and any part of frequency polygon outside range of first and last points plotted

3		18.6		M1	for finding 4 products within intervals (including end points)											
				M1	for $\Sigma fx$ $\div (1 + 2 + 7 + 8)$ or $(7.5 \times 1 + 12.5 \times 2 + 17.5 \times 7 + 22.5 \times 8) \div (1 + 2 + 7 + 8)$ or $(“7.5” + “25” + “122.5” + “180”) \div “18”$ or $“335” \div “18”$	<table border="1"> <thead> <tr> <th>Min <math>fx</math></th> <th>Max <math>fx</math></th> </tr> </thead> <tbody> <tr> <td>5</td> <td>10</td> </tr> <tr> <td>20</td> <td>30</td> </tr> <tr> <td>105</td> <td>140</td> </tr> <tr> <td>160</td> <td>200</td> </tr> </tbody> </table>	Min $fx$	Max $fx$	5	10	20	30	105	140	160	200
	Min $fx$	Max $fx$														
5	10															
20	30															
105	140															
160	200															
			A1	for 18.6(111...)	$\Sigma fx$ must come from 4 products $fx$ within intervals (including end points)											