

Frequency Polygons Past Paper Questions (MS)



Q1.

		Working	Answer	Mark	Notes
			Points plotted at (5, 6), (15, 9), (25, 8), (35, 7), (45,5) and joined with line segments	2	B2 for correct plotting of 5 points and joining with line segments (B1 for points plotted correctly at midpoints of intervals OR joining points with line segments at the correct heights and consistent within the class interval (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

Q2.

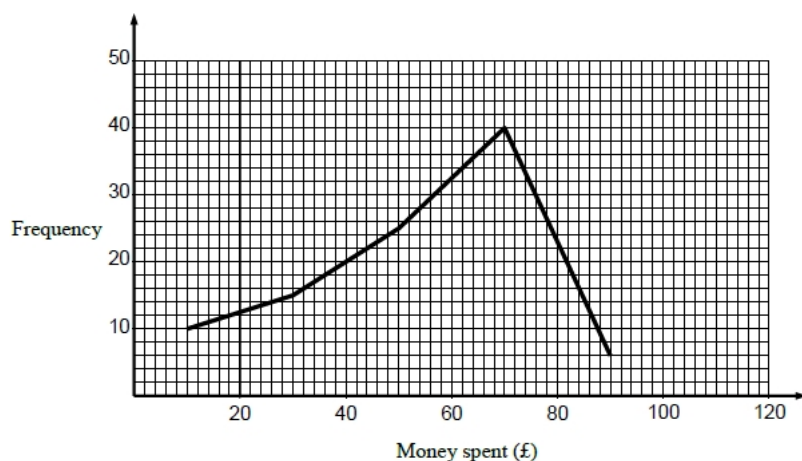
Question	Working	Answer	Mark	Notes
		Polygon drawn	2	B2 for correct frequency polygon (B1 for points plotted at correct midpoints of intervals or joining points at correct heights consistently within intervals including plotting at end values or correct frequency polygon with one point incorrect or correct frequency polygon with first and last points joined directly) NB ignore any histogram drawn and any part of frequency polygon outside range of first and last points plotted

Q3.

Question	Working	Answer	Mark	Notes
(a)		Frequency polygon	2	B2 correct frequency polygon (B1 for points plotted correctly but not joined or for points plotted at the correct heights, consistently placed within the class intervals (including ends) and joined or for an otherwise correct frequency polygon with no more than one point incorrect or correct frequency polygon with first and last points joined directly) NB: ignore parts of graph drawn to the left of the 1 st point or the right of the last point; ignore any histograms drawn.
(b)		$60 < A \leq 80$	1	B1 ft from their frequency polygon



(a)



Q4.

Question	Working	Answer	Mark	Notes
(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

Q5.

Question	Working	Answer	Mark	Notes
		mistakes identified	2	C1 points joined with curve, not line segments C1 points not plotted at mid-points



Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
	Two statements	C2	<p>Two different statements</p> <p>Acceptable</p> <p>There is no 'frequency' label / y-axis is not labelled / no title for the y-axis</p> <p>The polygon should not be closed / have a line at the bottom / have first and last points connected</p> <p>(15, 6) has been plotted incorrectly / at (15, 8) / (The first point is at) 8 rather than 6 / First point is on an incorrect frequency</p> <p>Not acceptable</p> <p>There is no title / Points should be joined with a curve</p> <p>x-axis doesn't start at 0</p> <p>There is no label</p> <p>The axes have not been labelled (x and y)</p> <p>The points haven't (all) been plotted correctly</p> <p>$10 < w \leq 20$ and $30 < w \leq 40$ have been plotted wrong</p> <p>The first point is plotted incorrectly, its at (15, 7) not (15, 6)</p> <p>The points have been joined up wrong / Points should not be joined in the shape of a triangle / They've connected all the points</p> <p>Done the midpoints rather than the numbers on the right side / The points are in the middle</p>	Ignore additional statements provided no contradiction
		(C1	for one statement eg from those above)	

Q7.

Question	Answer	Mark	Mark scheme	Additional guidance
	40 missing from frequency scale	C2	<p>Two different statements</p> <p>Acceptable</p> <p>eg (50, 5) / the last point is incorrect</p> <p>the last point should be at (45,5)</p> <p>the last point plotted was placed incorrectly</p> <p>for his last point he has plotted by the end of the data and for the rest he has plotted by the middle</p> <p>he did not use the midpoint, he used 50 instead of 45</p> <p>40 missing (from vertical axis)</p> <p>vertical scale is not linear</p> <p>the frequency doesn't increase in the same intervals</p> <p>the vertical axis is not right</p> <p>Not acceptable</p> <p>eg the last point should be at (40, 5)</p> <p>bottom of the polygon should be connected</p> <p>he didn't start the graph at the origin</p> <p>he did not draw a polygon</p> <p>he has plotted the first 4 points at midpoint</p>	Ignore additional statements provided no contradiction
	Incorrect point (50, 5)	(C1	One acceptable statement)	



Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	$40 < h \leq 50$	B1	accept 40 – 50 oe	
(b)	polygon drawn	B2	for fully correct polygon with points plotted at the midpoints	Joining must be with line segments
	(15,7), (25,13) (35,14), (45,12) (55,16), (65,18)	(B1	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)	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