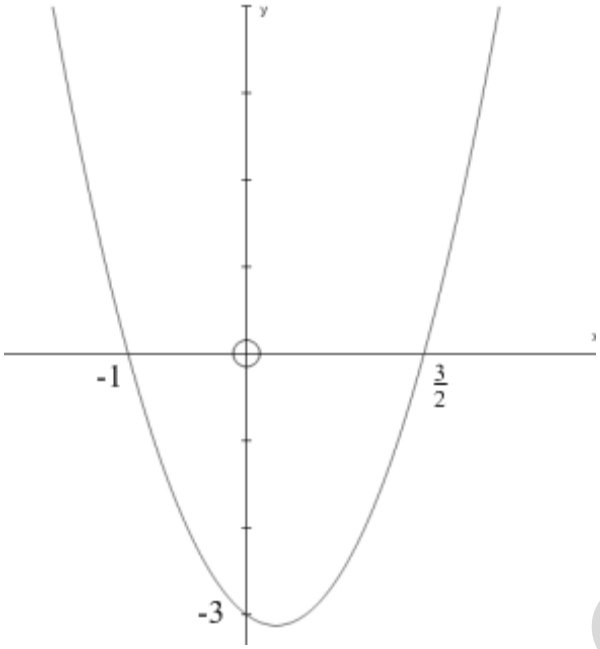
Question			Answer	Marks	AO	Guidance	
7	(a)		$x = \frac{3}{2}, x = -1$	B1	1.1	BC Correct roots	
				B1	1.1	Good curve: • Correct shape, symmetrical positive quadratic • FT Minimum point in the correct quadrant for their roots • FT their x intercepts correctly labelled	
				B1	1.1	y intercept at $(0, -3)$	Must have a curve
				[3]			
7	(b)		$x \in (-1, \frac{3}{2})$	M1	1.1	Choosing the interval between their x intercepts	
				A1FT	1.1	This interval identified clearly FT their x values in part (i)	Other clear notation is acceptable
				[2]			

Specimen

Question			Answer	Marks	AO	Guidance	
7	(c)		No real roots implies that the discriminant is negative $b^2 - 4ac = 1^2 - 4 \times 2 \times -(3+k) < 0$ $25 + 8k < 0$ $k < -\frac{25}{8}$	 **M1** **A1** **A1** **[3]**	 **3.1a** **1.1** **3.2a**		**OR** **M1** Attempt to find turning point and use $k < y_{\min}$ **A1** Turning point at $\left(\frac{1}{4}, -\frac{25}{8}\right)$
8	(a)		E.g. Members who attend may be of a particular type E.g. Absent members cannot be included	**B1** **[1]**	**2.5**	Any correct explanation Sample is not random **B0**	
8	(b)		156, 248 73, 181	**B1** **B1** **[2]**	**1.1** **1.1**	 Allow 073	965 must be discarded In *this* context do not accept a repeat of 156

Specimen