

Question	Answer	Marks	AO	Guidance	
3	DR Area below curve = $\int_0^1 x^5 \, dx$ Area below curve = $\left[\frac{x^6}{6}\right]_0^1 = \frac{1}{6}$ Area to left of curve = $1 - \frac{1}{6}$ $\left[\frac{\text{Area to the left of the curve}}{\text{Area below curve}} = \right] \frac{\frac{5}{6}}{\frac{1}{6}} = 5$	M1	1.1	Any correct expression for area below curve. Condone missing dx but limits required or used somewhere	The two steps could be done in either order Words not required. Reverse limits scores M0A0
		A1	1.1		
		M1	3.1a	1 minus <i>their</i> area below curve	Or Area to left of curve = $\int_0^1 y^{\frac{1}{5}} \, dy = \frac{5}{6} \left[y^{\frac{6}{5}}\right]_0^1 = \frac{5}{6}$
		E1	2.1	Convincing completion (answer given)	Dep. on previous 3 marks
		[4]			

Q3. This is the first Detailed Reasoning (DR) question the paper.

The first M1 is for giving any correct expression for the area below the curve OR the area to the left of the curve (as they could do it in either order). We will condone missing dx but we need to see the correct limits $\int_0^1 \dots$ either here or used in the calculation. Reversed limits will therefore score M0 A0 (can never give M0 A1).

The A1 is for showing the correct expression and the answer 1/6.

The second M1 is for finding the other area as $1 -$ their first area (even if their answer is negative).

The final B1 is dependent on the other 3 marks and is for forming the fraction with both 5/6 and 1/6 and getting the answer 5. The words are not required provided the intention is clear. M0A0M1B0 is possible.