

Question			Answer	Marks	AO	Guidance
3	(a)		$f(3) = 3^3 - 3^2 - 5 \times 3 - 3 = 0$	B1 [1]	1.1	Must see substitution; <i>or</i> factorise showing factor $(x - 3)$ No conclusion required beyond $=0$ (so e.g. accept long division leading to remainder 0).
3	(b)		$(x - 3)(px^2 + qx + r)$  $(x - 3)(x^2 + 2x + 1)$ $(x - 3)(x + 1)(x + 1)$	M1  A1 [2]	3.1a  1.1	Attempt quadratic factor by inspection or division. Look for $(x - 3)$ and a quadratic or two linear factors. NB this step may be seen in (a).  or $(x - 3)(x + 1)^2$
3	(c)		Fig 1.1: no value (of $a$ ) Fig 1.2: ( $a =$ ) 2 Fig 1.3: ( $a =$ ) 1	B1 B1 B1 [3]	2.2a 2.2a 2.2a	Accept values between 1.9 and 2.1 Accept values between 0.9 and 1.1