

Question		Answer	Marks	AO	Guidance
6		$a=3$	B1	1.1b	
		Attempt to divide the cubic by $(x+2)$	M1	1.1a	Allow grid method or long division as far as the linear term of the quotient
		$b=-5$	A1	1.1b	May be embedded in final expression
		$c=4$	A1	1.1b	May be embedded in final expression FT their b
		$d=-13$	B1	1.1b	May also be found using the remainder theorem. May be embedded in final expression
		[So $f(x) = (x+2)(3x^2 - 5x + 4) - 13$]			Need not be given explicitly if all coefficients seen
		By inspection $f(x) = (x+2)(3x^2 - 5x + 4) - 13$	B1 M1 A1 A1 B1		B1 for a embedded in their expression even if incomplete Method may be implied by correct b , or correct FT for c $b = -5$ $c = 4$ FT their b with $c = -6 - 2b$ May also be found using the remainder theorem. May be embedded in their expression
			[5]		

Alternative method

$a = 3$

expanding and equating coefficients

quadratic term $2a + b = 1$

linear term $2b + c = -6$

constant term $2c + d = -5$

$b = -5$

$c = 4$

$d = -13$

So $f(x) = (x + 2)(3x^2 - 5x + 4) - 13$

B1**M1****A1****A1****B1**

expanding and equating coefficients for at least the quadratic or linear term

May be embedded in final expression

May be embedded in final expression FT their b

May also be found using the remainder theorem.

May be embedded in final expression

Need not be given explicitly if all coefficients seen

[5]