Q	Working	Answer	Mark	Notes
26	**For one of:** $10^{4n} = (5\times 2)^{4n}$ **or** $5^{4n}\times 2^{4n}$ **or** oe $20^2 = (5\times 2^2)^2$ **or** $5^2\times 2^4$ **or** $5^2\times 2^2\times 2^2$ **or** cancelling 5^2 on numerator with 20^2 to get 16 or 2^4		5	M1 for writing 10^{4n} correctly as a product of 5 and 2 to the power $4n$ oe **or** writing 20^2 correctly as a product of 5 and 2^2 to the power 2 oe **or** cancelling 5^2 on numerator with 20^2 to get 16 or 2^4
	for getting numerator to the stage (this scores M1M1) $2^{4n}\times 2^{3n^2-15n}\times 5^2$ oe eg $2^{3n^2-11n}\times 5^{-4n+4n+2}$ oe **or for two of** $10^{4n} = (5\times 2)^{4n}$ **or** $5^{4n}\times 2^{4n}$ **or** oe $20^2 = (5\times 2^2)^2$ **or** $5^2\times 2^4$ **or** $5^2\times 2^2\times 2^2$ **or** cancelling 5^2 on numerator with 20^2 to get 16 or 2^4 or getting the numerator to the stage			M1
	$\frac{2^{4n}\times 2^{3n^2}\times 2^{-15n}}{2^4}[=1$ **or** $2^0]$ *or* $2^{4n}\times 2^{3n^2}\times 2^{-15n} = 2^4$ oe			M1 For writing the equation in powers of 2 only
	$3n^2 - 11n - 4[=0]$			A1 Correct quadratic equation dep on M1
	working required	$-\frac{1}{3}$, 4		A1 Both answers required dep on M1
				Total 5 marks

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