Question	Answer	Mks	AO	Guidance	
5	$N = 3k + 1$ or $N = 3k + 2$ (where k is an integer)	**M1**	**3.1a**	**One** of these. Allow without "N = "	Any letter other than p
	$(3k + 1)^2$ $(3k + 2)^2$	**M1**	**1.1**	Attempt **one** of these	Allow p
	$= 9k^2 + 6k + 1$ $= 9k^2 + 12k + 4$	**A1**	**2.1**	**Both** correct	Allow p
	$= 3(3k^2 + 2k) + 1$ or $= 3(3k^2 + 4k + 1) + 1$	**A1**	**2.4**	Or $9k^2+6k$ div by 3 or $9k^2+12k+3$ div by3 **One** of these	or similar in words. Allow p
	Both these are of form $3p + 1$, p an integer	**E1**	**2.2a**	Must say p is integer or $3k^2 + 2k$ and $3k^2 + 4k + 1$ are integers	Dep on M1M1A1A1 $N = 3p + 1$: max M0M1A1A1E0
				Similar marks for method using $N = 3k + 1$ & $N = 3k – 1$	
		[5]			