A - Level Further Maths 15 Minute Boost 3

Define $tanh(x)$ in terms of exponentials.	
State the modulus- argument form for a complex number.	
What is the 3 by 3 identity matrix?	
Find the scalar product of $\begin{pmatrix} 2\\1\\2 \end{pmatrix}$ and $\begin{pmatrix} 2\\-4\\-1 \end{pmatrix}$	
$\sum_{r=1}^{n} r =$	

1 Find the matrix representing a rotation, centre the origin of 270° counter clockwise, followed by a reflection in the line y = -x.



2 Prove by induction
$$\sum_{r=1}^{n} r^2 = \frac{1}{6}n(n+1)(2n+1)$$

