A - Level Further Maths 15 Minute Boost 7

$\cos(iz) =$ $\sin(iz) =$	
For the curve with polar equation $r = f(\theta)$, for tangents perpendicular to the	
For a curve with polar equation $r = f(\theta)$ the area of the region enclosed by the curve between $\theta = \theta_1$ and $\theta = \theta_2$ is	
$\begin{vmatrix} a & b & c \\ d & e & f \\ g & h & i \end{vmatrix} =$	
If A is an orthogonal matrix then	

1 Sketch the locus $|z - 3 + 4i| = 4$

2 a) Let $\dfrac{\mathrm{d}y}{\mathrm{d}x} = -\dfrac{y}{x} + 2$ with $y(1) = 3$. Use Euler's method with a step size of 0.1 to find an approximate value of $y(1.3)$.

b) Solve $\dfrac{\mathrm{d}y}{\mathrm{d}x} = -\dfrac{y}{x} + 2$ with $y(1) = 3$ analytically and thus comment on the accuracy of your computed value of $y(1.3)$ from part (a).