

pp6

Using the Pythagorean theorem, $\sin^2 x + \cos^2 x = 1$, and knowing that $\sin z$ and $\cos z$ are analytic functions, what can we say about $(\sin z)^2 + (\cos z)^2$

Show that $\cos(A+B) = \cos A \cos B - \sin A \sin B$ using exponential expressions for \sin and \cos

What are the zeros of a) $e^x + e^{-x}$, x real ?

b) $e^z + e^{-z}$, z complex?