Considerando o complexo $z = 2 + 3.i$,

$a) \sqrt{2^2 + 3^2} = \sqrt{13}$

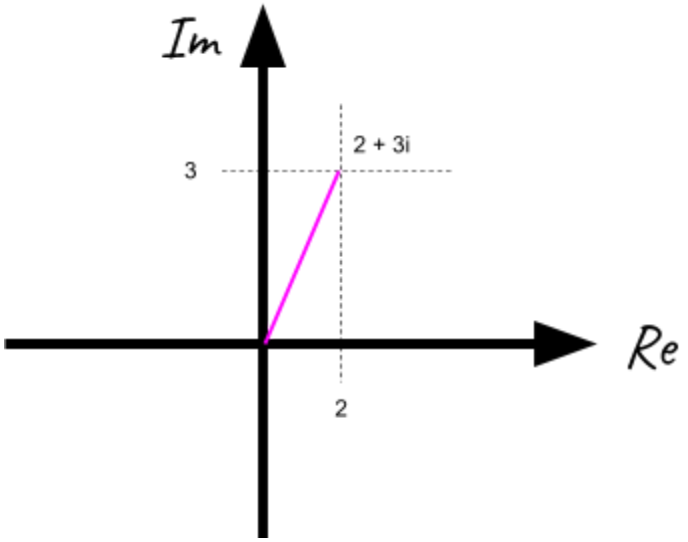
$z = |z|.cis(\theta) = \sqrt{13}.[cos(\theta) + i.sin(\theta)$

$\theta = arctan(\frac{3}{2}) = arctan(1,5) \approx 0,982793723\, rad$

$b) \bar{z} = 2 - 3i$

$c) z^2 = (2 + 3i)^2 = 4 + 2.2.3.i + 9.i^2 = -5 + 12i$

$d)$



e) A forma exponencial é definida como: $e^{\theta.i} = cis(\theta)$. Utilizando o ângulo θ calculado em a), temos:

$z = cis(1,5) = e^{1,5.i}$