The complex exponential: $e^{i\omega t}$ is useful in calculating properties of many time-dependent equations. According to Euler, we can also write this function as:

A. $\cos(i\omega t) + \sin(i\omega t)$
B. $\sin(\omega t) + i\cos(\omega t)$
C. $\cos(\omega t) + i\sin(\omega t)$
D. MORE than one of these is correct
E. None of these is correct!

ANNOUNCEMENTS

- Quiz 3 (next Friday 2/22) - RLC circuits
  - Solve a circuit problem using the phasor method
  - Discuss limits on the response and how it might act as a filter

What is $|2 + i|$?

A. 1
B. $\sqrt{3}$
C. 5
D. $\sqrt{5}$
E. Something else!

What is $(1+i)^2/(1-i)$?

A. $e^{i\pi/4}$

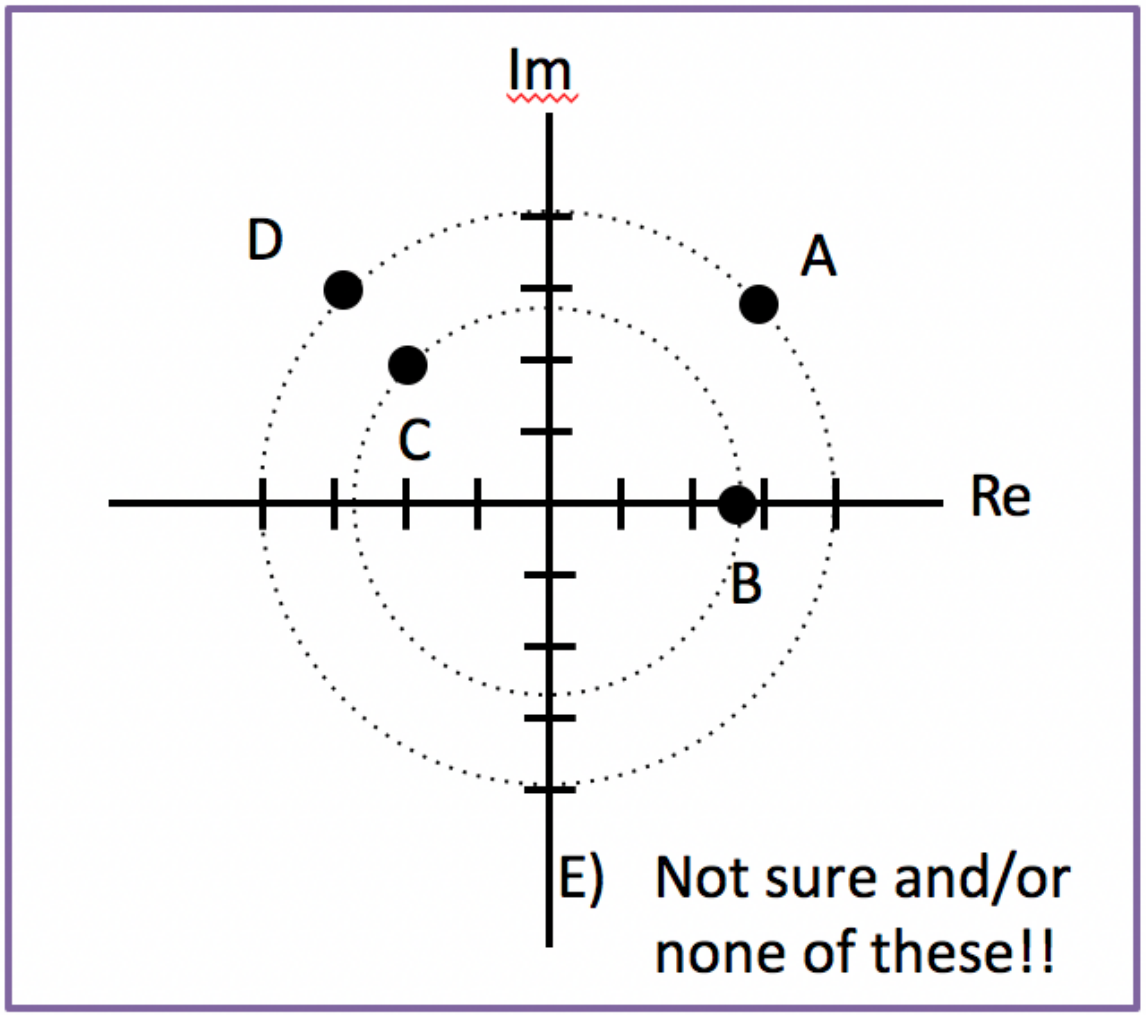
B. $\sqrt{2}e^{i\pi/4}$

C. $e^{i3\pi/4}$

D. $\sqrt{2}e^{i3\pi/4}$

E. Something else!

Which point below best represents $4e^{i3\pi/4}$ on the complex plane?



What is $Re\left[\frac{e^{i\omega t}}{1+i}\right]$?

A. $\frac{1}{\sqrt{2}}\cos(\omega t + \pi/4)$

B. $\frac{1}{\sqrt{2}}\cos(\omega t - \pi/4)$

C. $\frac{1}{2}\cos(\omega t + \pi/4)$

D. $\frac{1}{2}\cos(\omega t - \pi/4)$

E. Something else