Announcements

• Midterm stuff
  • Histogram & stats on next page
  • Will be returned in sections (need to resolve grading questions then and there)
• Solutions on webpage & Piazza
• Grades should be on eCommons this afternoon
• Poll open for another ~2 days on Piazza
• This week’s HW (#5) is the last one for AMS 10A
  • Still need to take the final!
Midterm stats

Mean: 65
Std. Dev: 15
Outline

- Polar form for complex numbers
- DeMoivre’s Theorem
- Complex exponentials (two ways)
- How to easily derive trig identities
What is (-1- i) in polar form?

A: $\sqrt{2} \left( \cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$

B: $-\sqrt{2} \left( \cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$

C: $\sqrt{2} \left( \cos \frac{5\pi}{4} + i \sin \frac{5\pi}{4} \right)$

D: $-\sqrt{2} \left( \cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$

Answer: C - Magnitude must be positive, so even though B describes the same point, the notation is not correct (we’ll see later that forcing magnitudes to be positive makes for convenient arithmetic rules).