

Review Problems for the Final

Do these problems

- Chapter 8.2 numbers 7, 9
- Chapter 8.6 numbers 5, 7, also redo a rotation problem
- Chapter 8.9 numbers 2, 5, 8
- Chapter 8.12 number 1
- Section 6.2 numbers 5, 10, 12, 14, 19, 39
- and these
 - (a) Convert to rectangular coordinates $(-2, -\frac{5\pi}{4})$, where the point is given in polar coordinates.
 - (b) Convert to polar coordinates $(-2, 2\sqrt{3})$, where the point is given in rectangular coordinates.
 - (c) Find $\frac{2-3i}{3+2i}$.
 - (d) Compute $(-1 + \sqrt{3}i)^{25}$.
 - (e) Find the solutions of $z^3 = -i$.
 - (f) Approximate the area under the graph of the function $f(x) = \frac{\ln x}{x}$, over the interval $[1, 5]$ by a Riemann sum, using the partition $\{1, 2, 4, 5\}$. Evaluate f at the left endpoints.