Math 2E − Suggested Homework 6

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Thursday, February 13, 2020

Reading: Section 16.4: Don't worry about the proof of Green's theorem or the orientation-business.

- **Section 16.4:** 2, 6, 7, 10, 11, 12, 18, 21[1], 27[2], AP

Additional Problem: Find the area of inside the asteroid with parametric equations $x(t) = \cos^3(t)$, $y(t) = \sin^3(t)$, $0 \leq t \leq 2\pi$ (for a picture, see problem 34 in section 10.2 on page 655).

Hint: To calculate the integral, you need $\cos(t)\sin(t) = \frac{1}{2}\sin(2t)$, as well as a $u-$substitution $u = 2t$.

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[1]This problem is SO cool!!!

[2]No need to show that it's independent of the curve, just calculate the value