

Math 2D – Suggested Homework 9

Peyam Tabrizian

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Reading: Sections 15.3 and 15.6. In section 15.3, you only need to know Formula 2 on top of page 1012, as well as Examples 1 and 2; ignore Examples 3 and 4. The hardest trig integral I can ask you is $\int \sin^2(x)$ or $\int \cos^2(x)$, I won't ask you about $\int \sin^4(x)$ or stuff like that. Section 15.6 is the hardest section of the course and I will spend two lectures on it. In 15.6, you **don't** need to know the definition of the integral or Fubini's theorem (but of course know how to use it) and you don't need to know the names of the regions (and personally I find the formulas on page 1031 confusing). Finally, the only applications you need to know are Formula 12 on page 1034 (volume) and the average value (exercise 53), you are **not** responsible for moments, center of mass, etc.

Note: There will be **no** class on Monday, May 28, because of Memorial Day. That said, there will be a Suggested Homework 10 with more problems from section 15.6, and there **will** be a quiz on Thursday, June 7; please ask your TA what the quiz will be on.

- **Section 15.3:** 5, 9, 11, 12, 13, 20, 23, 25, 26, 37
- **Section 15.6:** 1, 8, 10, 13, 14, 15, 17, 18, 19, 20