

Guidelines: Homework is regularly assigned but not collected. Do it promptly. Keep a separate homework notebook.

Your solutions should always include reasoning. This helps reinforce logical structure, and trains you in critical thinking. Write clearly. Do not put an equals sign between unequal quantities, or quantities you have not yet proved are equal. Use words like “hence”, “therefore” to connect statements or equations, and indicate the chain of reasoning. Interpret your answers. Use “we are given”, “we want to show that” to distinguish clearly between what is given and what is to be found.

Problems done in class are also listed, most of the time.

- §4.5 p. 284 1 – 23(odd), 17, 33, 51, 57, 59, 69(challenge).
Give an explanation of the Fundamental Theorem of Calculus, using figures, words, a limit and a derivative. (Fig 4.19 and Fig. 4.20 on p.279 and the accompanying text will help).
In class: 4 (also find total area), 10, 14, 20, 33(motivates topic of next section)
- §4.6 p. 291 1 – 35 (odd), 39, 43, 49, 51, 53, 55, 57.
In class: 16, 23, 32, 40, 44, 57
- §4.7 p. 298 1 – 21 (odd), 25 – 31 (odd), 37, 47, 51 – 57(odd), 63, 65, 71, 75, 79.
In class: 8, 32, 42, 52, 64.
Challenge problem (only after you have mastered all the others): p.300: 84
Use Integration Tables to solve: p.299: 39, 41, 42, 45; p.303: 71, 73, 105, 107, 109.
Reminder: Review supplemental material on units and the definite integral; average value.
- Review Questions: p. 301: 5, 11.
Additional Exercises: p. 301: 1 – 7(odd), 13, 17, 19, 35 – 43(odd), 51 – 69(odd), 77 – 83(odd), 89 – 103(odd).
- §5.1 p. 311 1 – 18, 21 – 24, 33, 35, 36.
For the assigned problems from 5.2 and 5.3, solve using a combination of u -substitution integration tables and reduction formulas. Some problems might be completely straightforward! Learn to recognize them.
- §5.2 p. 318 5, 9, 11, 13, 25, 29, 35.
- §5.3 p. 322 1 – 13 (odd), 29, 35, 39.
- §5.4 p. 328 1 – 23 (odd), 29, 35, 37, 41. In class: 12, 18, 24.
- §5.5 p. 334 11, 13, 17, 21, 23, 29, 35, 39, 41.
- §5.6 p. 342 7, 17, 23, 25
- §5.7 p. 352 1 – 19 (odd), 25, 27, 33, more to come.
- §3.7 p. 224 1, 3, 9 – 23 (odd), 31, 45, 55, 61, 63, 66.
Study solved Examples 1, 4, 7, 8 from p. 220 – 224.
Emphasis on Indeterminate forms $0/0$, ∞/∞ , 1^∞ .
- §6.1 p. 365 13 – 17, 19 – 25 (odd), 35 – 40, 45, 47, 49.

Study solved Examples 1, 3, 4, 6, 7, 8, 9, 10 on p. 357 – 364.

In class: 16, 36, 40, 48.

§6.2 skip

§6.3 p. 379 3, 7, 9, 17, 19, 21, 35.

Problem 19 can be done using Integral Tables. For Problem 21, use the `nInt` function on your calculator, that evaluates integrals numerically.

Study solved Examples 1, 2, 3.

§6.4 p.388 1, 5, 7, 9, 11, 17, 19 – 25, 27, 29, 31 – 33, 35.

Study solved Examples 1 – 5.

§6.5 p.395 1 – 9 (odd), 13abc, 15 – 17.

Study solved Examples 2 – 5.

§7.1 p. 419 7 – 27 (odd).

In class: 12, 16, 20, 26, 37, 42, 48, 53, 58.

§7.2 p. 429 3 – 15 (odd), 19, 21, 22, 23 – 33(odd), 41 – 47 (odd), 51, 57.

In class: 12, 14, 28, 38, 42, 47.

§7.3 p. 435 1 – 15, 17 – 19, 25, 28, 39, 40.

In class: 9, 14, 18, 20, 28, 40.

§7.4 p. 439 1 – 9, 11 – 13, 15, 17, 19, 20.

In class: 3, 8, 12, 20.

§7.5 p. 442 3, 4, 5, 8, 9, 11, 15, 17 – 22, 29, 30, 33, 37.

In class: 20, 21, 22.

§7.6 Study solved Examples 1, 3, 4. Theorem 15 on error estimation is important!

Study the box on p. 447, summarizing the tests for convergence or divergence of a series.

p 447 1, 3, 11, 13, 17, 18, 29, 34, 35, 45.

In class: 18, 34

§7.7 p 455 1 – 7 (odd), 8, 11, 13, 17, 25, 33, 34, 39 – 43.

In class: 8, 14, 24, 41. Also solved Examples 5, 6 on p. 454–456

§7.8 p 462 1, 2, 3, 5, 6, 9, 10, 11 – 17(odd), 21, 34, 37, 38.

In class:

§7.9 p 468 1, 2, 3, 7 – 10, 12, 17, 19, 20, 21, 23, 24, 25, 29, 30, 32.

In class:

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