

This exam covers Sections 7.1-7.5 and 7.7-7.8 In particular, you need to be able to:

- Evaluate definite and indefinite integrals
- Estimate the value of definite integrals using numerical integration
- Determine whether improper integrals are convergent or divergent, Comparison Test

There is also one “fill-in-the-blanks” question which tests your knowledge of basic facts and your understanding of key ideas.

Formulas that will be provided:

$$\begin{aligned} \sin^2 x &= \frac{1}{2}(1 - \cos 2x) & \int \sec x \, dx &= \ln |\sec x + \tan x| & \int \tan x \, dx &= \ln |\sec x| \\ \cos^2 x &= \frac{1}{2}(1 + \cos 2x) & \int \csc x \, dx &= \ln |\csc x - \cot x| & \int \cot x \, dx &= \ln |\sin x| \\ \sin x \cos x &= \frac{1}{2} \sin 2x \end{aligned}$$

Recommended exercises for review:

- Ch 7 Review True/False Quiz: 2, 3, 4, 7, 9, 10, 11, 14
- Ch 7 Review Exercises: 3, 5, 6, 7, 11, 15, 17, 33, 43, 68\*, 71; Also 7.7.1
- \*For #68, use the trapezoidal rule with 6 subdivisions (not Simpson’s rule.)

Groups and assignments for in-class study session:

| Ch 7 Rev TF            | Ch 7 Rev Exer 3, 7        | Ch 7 Rev Exer 5, 15      | Ch 7 Rev Exer 6, 17  |
|------------------------|---------------------------|--------------------------|----------------------|
| Minogue, Alexandra L.  | Hauser, Logan J.          | Al Khalifa, Hassan A.    | Bartness, Jacklyn L. |
| Krizak, Troy C.        | Oriental, Jobson          | Al Sowaimel, Mohammed F. | Paugh, Sydney H.     |
| Dosmann, Clayton K.    | Alkaf, Waleed K.          | Alkhalifah, Abdulaziz M. | Blasucci, Michael C. |
|                        |                           |                          | Wesson, Langston M.  |
|                        |                           |                          |                      |
| Ch 7 Rev Exer 11, 13   | 7.7: 1, Ch 7 Rev Exer: 68 | Ch 7 Rev Exer 43, 71     |                      |
| Audi, Milad C.         | Otto, Austin T.           | Muske, Nicole O.         |                      |
| Pedersen, Alexander C. | Grathwohl, Matthew R.     | Mueller, Janelle M.      |                      |
| Shlanta, Karl S.       | Panicola, Noah M.         | O'Malley, Jordan E.      |                      |
| Veil, John T.          | Murphy, Barnes G.         | Tran, Lam-Mien           |                      |
|                        |                           |                          |                      |

| Ch 7 Rev TF                | Ch 7 Rev Exer 3, 7        | Ch 7 Rev Exer 5, 15    | Ch 7 Rev Exer 6, 17      |
|----------------------------|---------------------------|------------------------|--------------------------|
| Kolasa-Lenarz, Nicholas G. | Stans, Paul V.            | Choudek, Peter M.      | Eisenreich, Catherine G. |
| Efejuku, Michael M.        | McBride, Samuel S.        | Anundson, Nicholas R.  | Ramos, Leslie            |
| Anderson, Ryan C.          | Frost, William A.         | Grandgenett, George H. | Rubbelke, Elizabeth A.   |
| Larson, Dakota E.          | Dover, Austin J.          | Kraft, Nathan R.       |                          |
|                            |                           |                        |                          |
| Ch 7 Rev Exer 11, 13       | 7.7: 1, Ch 7 Rev Exer: 68 | Ch 7 Rev Exer 43, 71   |                          |
| Dosse, Alyssa M.           | Vetter, Patrick T.        | Gray, Taylor J.        |                          |
| Roy, Cassandra J.          | Rear, Jacob J.            | Rodgers, Adam M.       |                          |
| Li, Brian                  | Ponath, William T.        | Dougan, Gabrielle R.   |                          |
|                            | Favorito, Vincent S.      | Hahn, Nathan D.        |                          |
|                            |                           |                        |                          |