

MATH 1452-012: EXAM 2 INFO/LOGISTICS/ADVICE

• **INFO:**

WHEN:	Wednesday (03/12) at 2:00pm	DURATION:	110 minutes
PROBLEM COUNT:	Appropriate for a 110-minute exam	BONUS COUNT:	Several

– TOPICS CANDIDATE FOR THE EXAM: (“SST” = “Strauss, Smith & Toda” (i.e. the textbook))

- * SST 7.2: Integration by Parts (IBP)
- * SST 7.3: Integration involving Trig & Trig Substitution
- * SST 7.4: Integration using Partial Fraction Decomposition (PFD)
- * SST 7.5: Integration Strategy
- * SST 7.7: Improper Integrals
- * REMARK: **No basic integral formulas will be provided**, so either memorize or derive them.
- * REMARK: **No trig identities will be provided**, so either memorize them or learn how to derive them.

– TOPICS CANDIDATE FOR BONUS QUESTIONS:

* SST 7.7: Gamma Function: $\Gamma(\alpha) = \int_0^{\infty} x^{\alpha-1} e^{-x} dx$

* ??????

* REMARK: **Maximum Bonus Points Possible = 20**

– TOPICS NOT COVERED AT ALL:

- * SST 7.1: Integration using a Table of Integrals
- * SST 7.3: Reduction Formulas for Secant & Cosecant: ($n \geq 5$)

$$\int \sec^n(\alpha u) du = \frac{\sec^{n-2}(\alpha u) \tan(\alpha u)}{\alpha(n-1)} + \frac{n-2}{n-1} \int \sec^{n-2}(\alpha u) du,$$

$$\int \csc^n(\alpha u) du = -\frac{\csc^{n-2}(\alpha u) \cot(\alpha u)}{\alpha(n-1)} + \frac{n-2}{n-1} \int \csc^{n-2}(\alpha u) du$$

- * SST 7.4: Weierstrass Substitution: $u = \tan\left(\frac{x}{2}\right)$
- * SST 7.6: 1st-order Ordinary Differential Equations (entire section)
- * SST 7.8: Hyperbolic Functions (entire section)

• **LOGISTICS:**

- **All you need to bring are pencil(s), eraser(s) & your Raidercard.**
- Clear your desk of everything except pencil(s) and eraser(s).
- Books, notes, notecards, calculators NOT PERMITTED.
- Mobile devices (phones, tablets, PC’s, music, ...) are to be shut off and put away.
- Tissues will be furnished – for allergies, not for sobbing.
- No talking or cheating!
- **When you turn in your exam, be prepared to show me your Raidercard if I don’t recognize you.**
- **If you ask to use the restroom during the exam, either hold it or turn in your exam for grading.**

• **ADVICE:**

- **Use the restroom before the exam, if needed.**
- Review past homework, and perhaps even work some similar problems in the textbook.
- Review relevant examples in the textbook & the PDF slides.
- Use flashcards to aid in memorization of hard formulas.
- Study for the exam together in groups.
- Show up to the last-minute help session on Tuesday (03/11) in MATH 016.
- **SHOW APPROPRIATE WORK! Attempt bonus questions.**