

MATH 2360-008: EXAM 1 INFO/LOGISTICS/ADVICE

• INFO:

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|----------------|-------------------------------|--------------|--------------|
| WHEN: | Friday (09/18) at 9:00am | DURATION: | 50 mins |
| PROBLEM COUNT: | Appropriate for a 50-min exam | BONUS COUNT: | At least one |

– TOPICS CANDIDATE FOR THE EXAM:

- * LARSON 1.1: Classification of $m \times n$ Linear Systems: Types of Systems, Qualitative Solutions
- * LARSON 1.2: Elementary Row Operations, Gauss-Jordan Elimination, Reduced Row-Echelon Form (RREF)
- * LARSON 1.3: Curve Interpolation [EXAMPLES 1 & 2 (pgs 25-26)]
- * LARSON 1.3: Differential Curve Interpolation [not in book, see EX 1.3.2 & 1.3.3 in 1.3 Outline]
- * LARSON 2.1: Matrix Algebra: Matrix Addition/Subtraction/Multiplication, Scalar Multiplication, Transposes
- * LARSON 2.2: Properties of Matrix Algebra, Zero/Identity/Diagonal Matrices, Powers of a Square Matrix
- * LARSON 2.3: Inverse of a Square Matrix: Properties, finding via Gauss-Jordan Elimination
- * LARSON 2.4: Elementary Matrices, LU -Factorization of a Matrix

– TOPICS CANDIDATE FOR BONUS QUESTIONS: (Maximum Bonus Points Possible = 15)

- * ?????

– TOPICS NOT COVERED AT ALL:

- * **Proofs of any kind, Graphs of any kind**
- * LARSON 1.2: Gaussian Elimination & Row-Echelon Form (REF) [EXAMPLE 5 (pg 17)]
- * LARSON 2.1: Linear Combinations [EXAMPLE 7 (pg 47)], Block Multiplication [#83-84 (pg 51)]
- * LARSON 2.2: Kronecker Delta δ_{ij} , Roots & Polynomial Functions of Matrices [#53-56 (pg 60-61)]
- * LARSON 2.3: Householder Matrices [#77 (pg 73)]
- * LARSON 2.4: Idempotent Matrices [#49-53 (pg 83)]
- * LARSON 1.3: Curve Fitting by Translating x -values or Taking Log's [EXAMPLES 3 & 4 (pgs 26-28)]
- * LARSON 1.3: Network Analysis (pgs 29-31), Heat Flow [#35-36 (pg 34)], Partial Fractions [#37-38 (pg 34)]
- * LARSON 2.5: Applications of Matrix Operations (entire section)
- * **Any applications mentioned in other sections**

• 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.
- Do not be late to the exam.
- Review the slides, past homework, and perhaps even work some similar problems in the textbook.
- Use flashcards to aid in memorization of hard formulas.
- Study for the exam together in groups.
- Show up to the review session on Wednesday (09/16).
- **If you need more review, show up to the last-minute help session Thursday evening (09/17).**
- **SHOW APPROPRIATE WORK! Attempt bonus question(s).**