

MATH 281 MIDTERM 2 STUDY GUIDE

The exam covers Chapter 13, Sections 13.3, 13.4 and Chapter 14, Sections 14.1, 14.2, and 14.3.

How to prepare for this exam:

1. Look over all of your old homework. Make sure that what you did still makes sense.
2. Redo the quiz 2. Even if you did it perfectly, redoing will remind you about the different types of problems.
3. Read over your notes. There are many subtleties that are important to understand. Once you understand these then you understand the material much better.
4. Look over the Review section at the end of chapters 13 and 14.

You will not be able to use your notes on the exam. You can use one note card 3×5 inches with any formulas you wish.

Review questions:

- True-False quiz. Page 921: #7-14 and Page 1022: #1,2,5,8;
- Page 922: 10, 11, 12, 13, 15, 17, 19, 20, 21, 22;
- Page 1022: 9, 10, 13, 15, 16, 17, 19-22.
- Assigned homework exercises

Vocabulary:

- space curve
- tangent vector
- normal vector
- binormal vector
- length and curvature of space curves
- osculating plane, osculating circle
- normal plane
- velocity, acceleration
- normal and tangential components of acceleration
- functions of two and three variables
- limit of a function, continuous functions
- partial derivatives
- level curves of a function of two variables
- Clairaut's theorem