

Exam III Study Aid

Exam III : Sections 2.2, 3.1-3.3 & Summation Notation
Friday, March 30th (In Class)

Our third in-class exam will cover only the material from sections: 2.2, 3.1, 3.2 and 3.3; as well as the basics of summation notation that we covered in class (this material can be found in Section 5.2). You will have the entire class period (50 minutes) to complete the exam (you may leave once you are finished).

Below is a list of the main concepts or definitions you should definitely know and be comfortable with. (Note: this list is not a comprehensive list of all the topics we have learned in Sections 2.2 and Sections 3.1-3.3, it is simply a list of the very important topics. Hence, as a warning, there may be topics on the exam which are not listed below – i.e. don't simply study this list and nothing else!)

1. Vertex/Concavity of a Parabola
2. Formula for the Vertex
3. Standard (Vertex) Form of a Quadratic
4. General Form of a Quadratic
5. Converting from Standard to General Form
6. Converting from General to Standard Form
7. Intercepts of a Parabola
8. Minimum and Maximum Values of a Quadratic
9. Sigma Notation for a Summation
10. Definition of a Polynomial
11. Degree of a Polynomial
12. End-Behavior of a Polynomial (Behavior for Extreme x-values)
13. Common Characteristics of a Polynomial
14. The Division Algorithm
15. Polynomial Long-Division
16. Equivalent Meanings of “is a zero of the function”
17. Definition of a Rational Function
18. Reduced Rational Functions
19. Domain and Zeros of a Rational Function
20. Vertical/Horizontal/Slant Asymptotes
21. Properties of Asymptotes
22. Graphing Reduced/Unreduced Rational Functions

Finally, here is a list of good practice problems that might help you in studying. All of the problems were picked to be odd numbered so that their solutions would be found in the back of the book.

- Section 2.2 – 15, 17, 19, 21, 27, 31, 33, 37, 39, 41
- Section 3.1 – 9, 21, 31, 35, 43, 47
- Section 3.2 – 1, 3, 5, 7, 21, 23, 53, 55, 57, 59, 61
- Section 3.3 – 1, 3, 5, 7, 9, 11, 13, 17, 19, 31, 35, 37, 39, 43
- Section 5.2 – 1, 3, 5, 7, 11