

Math 150 Exam 2 Concepts and Skills

Sections 3.1-3.2, 3.4, 3.6, 4.1-4.5, 5.1-5.4

1. Know the parent functions, their graphs, domains, ranges, and anchor points.
2. Know how to graph using transformations of parent functions.
3. Be able to graph polynomial functions, making sure to indicate intercepts, behavior at roots, and end behavior.
4. Know how many local maxima and minima a polynomial function may have.
5. Be able to perform long division of polynomials and write the answer in the required form.
6. Be able to use the Factor Theorem.
7. Be able to perform operations on and simplify complex numbers.
8. Be able to graph rational functions, including intercepts, asymptotes, holes, and end behavior.
9. Be able to write exponential equations in logarithmic form and vice versa.
10. Be able to find and graph inverses of exponential and logarithmic functions.
11. Know how to set up and solve applications involving compound interest.
12. Be able to expand and condense logarithmic expressions using the properties of logarithms.
13. Be able to use the definition of logarithm to simplify logarithmic expressions and evaluate logarithmic expressions.
14. Be able to set up and solve application involving logarithmic functions.
15. Be able to solve exponential and logarithmic equations.
16. Know how to set up and solve applications of exponential growth and decay.
17. Be able to find and use reference numbers.
18. Know and be able to replicate the Unit Circle and use it to find trig values.
19. Know the fundamental trig identities (Pythagorean, even/odd).
20. Know the period of the trig functions and be able to graph the parent functions.
21. Be able to use transformations to graph trig functions.