

Math 30
Review for Exam 3

Make sure you can do the following types of problems

1. Take derivatives of expressions which include inverse trig functions.
2. Use a triangle to evaluate a trig function of an inverse trig function.
For example $\tan(\sin^{-1}(3x))$.
3. Do limits involving inverse trig functions.
4. Sketch the graph of a function which satisfies a given list of conditions.
5. Find the absolute max and min of a continuous function defined on a closed interval.
6. Given a function, find intervals of increase or decrease, find the local max and min values, find intervals of concavity, and find any inflection points.
7. After finding the above information, together with vertical and horizontal asymptotes, sketch the graph of the function.
8. Solve optimization problems: first find the relevant equation(s), determine the domain, find all critical points, then determine the absolute max or min according to what the problem asks.
9. Find antiderivatives.
10. Use rectangles to estimate the area under a curve.
11. Use antiderivatives and rectangles to solve problems about motion.
12. Evaluate summations.