

MATH 140 Exam III (3.7 - 4.6) Review

1. Know how to find the sum, difference, product, quotient and composite of a function and their respective domains.
2. Know how the intermediate value theorem and how to use it to show f has a zero in some interval.
3. Know how to sketch the graph of a polynomial and rational function.
4. Know how to divide polynomials using long division and synthetic division.
5. Know the remainder and factor theorem.
6. Know how to find the zeros of a polynomial
7. Know Descartes' rule of signs.
8. Know the first theorem on bounds for real zeros of a polynomials and how to find bounds for the real zeros of polynomials.
9. Know how to find the rational zeros of a polynomial and show that a polynomial has no rational zeros.
10. Know how to find the complex zeros of a polynomial.
11. Know how to find the domain, vertical & horizontal asymptotes of a rational function and be able to sketch its graph.
12. Know how to find equations for direct, inverse and joint variation.

Example exercises: Quiz & Homework questions;

Ch. 3 Review, #65-71;

Ch. 4 Test, #1-15;

Ch. 4 Review, #1-49