

PDEV 100
Exam 3 Review Sheet

Section 2.5 and 2.6 Introduction to Functions and Function Notation

- Know the definition of a function and understand the idea of the domain and range of a function. Be able to give an example of a function.
- Know the difference between a function and a relation, and be able to tell whether a given example is a function or not either from its description, from its graph, or by looking at ordered pairs.
- Given a function, be able to make a table of values for the function and sketch a graph of the function. Also be able to find the domain and range of a function from its graph.
- Know how to evaluate a function given either a specific input value or an input expression.

Section 2.7 Algebra with Functions

- Understand how to form functions by taking the sum, difference, product, quotient, or composition of two functions.
- Be able to find formulas for the sum, difference, product, quotient, or composition of two functions.
- Be able to evaluate the the sum, difference, product, quotient, or composition of two functions.
-

Section 4.1 Rational Expressions and Rational Functions

- Know the definition of a rational expression. Be able to simplify rational expressions by factoring and know how to evaluate rational expressions.
- Know the definition of a rational function. Be able to find the domain of a rational function in set notation.

Section 4.2 Division of Polynomials

- Know how to divide a polynomial by a monomial by splitting into separate terms.
- Know how to divide polynomials by factoring and deleting common factors.
- Know long division of polynomials.
- Be able to simplify expressions involving quotients of functions.

Section 4.3 and 4.4 Combining Rational Expressions

- Know how to multiply and divide rational expressions. Also know how to reduce rational expressions by factoring.
- Know how to add and subtract rational expressions by finding the lowest common denominator, combining the numerators, and then simplifying the result.

Section 4.5 Complex Fractions

- Know how to simplify complex fractions by multiplying by the reciprocal.
- Know how to simplify complex fractions by adding and subtracting terms first, and then multiplying by the reciprocal.

Section 4.6 Equations Involving Rational Expressions

- Know how to solve rational equations by finding a common denominator and then multiplying to clear the denominator.
- Make sure to check for “false” solutions.

Section 4.7 Application Problems Involving Rational Functions

- Know how to set up and solve application problems. Make sure to define variables in a sentence, to find and solve an equation, and to state your conclusion in a sentence.
- Be familiar with rate problems and work problems.

Practice Problems: Chapter 2 Review p. 269 # 23, 24, 27, 28, 29, 30, 31, 33, 35, 36

Practice Problems: Chapter 4 Review p. 419-421 # 1, 3, 5, 9, 11, 14, 15, 21, 23, 26, 28, 31, 34, 37, 39