Derivative Basics

Having the basic tools and techniques is essential for success.

3A	**Understanding the Definitions for Derivatives** • Explain and use both forms of the definition • Find derivatives at a point • Find derivatives of functions • Explain points of non-differentiability • Understand instantaneous rates of change **3.1 problems 1-3, 7-10, 13, 15, 22, 26, (3A.1, 3A.2, 3A.3, 3A.6)** **3.2 problems 3-9 odd, 11, 12, 15, 17, 21, 30 (3A.4, 3A.5)**	
3B	**Finding Basic Derivatives** • Algebraic (Power rule) • Trig, Inverse Trig • Logarithmic, Exponential **3.3 problems 7, 10-12, 13, 16, 1820, 21-29 odd (3B.1, 3B.3, 3B.4)** **3.5 problems 1-21 odd (3B.2)**	
3C	**Understanding Derivatives of Combined Functions** • Use the product rule • Use the quotient rule • Use the chain rule **3.6 problems1-19 odd, 29 31, 39, 56 (3C.1)** **3.8 problems 1-17 odd (3C.2)** **3.9 problems 1-39 odd, 45 & 46 (shared with 3D (3C.3)**	
3D	**Applying Techniques to Find Derivatives** • Combine rules to find derivatives • Use logarithmic differentiation • Implicitly find derivatives **3.7 11-25 odd, 41**	
3E	**Interpreting Derivatives** • Explain the meaning of a derivative in context • Explain the connections between a function and its higher-order derivatives	