**Ch. 12 Limits and Derivatives**

**12.1 Estimating Limits Graphically**

1) I can estimate limits of functions at fixed values.

2) I can explain why limits at a certain point do not exist.

3) I can estimate limits of functions at infinity.

**12.2 Evaluating Limits Algebraically**

1) I can evaluate limits of polynomial and rational functions at selected points.

2) I can evaluate limits of polynomial and rational functions at infinity.

3) I can determine the limit of a given sequence.

**12.3 Tangent Lines and Velocity**

1) I can find instantaneous rates of change by calculating slopes of tangent lines using the difference quotient.

2) I can find average and instantaneous velocity.

**12.4 Derivatives**

1) I can determine the derivative of a function using the Power Rule.

2) I can find instantaneous rate of change by calculating derivatives.

3) I can use the Extreme Value Theorem to determine maximum and minimum.

4) I can find the Product and Quotient Rules to calculate derivatives.

**12.5 Area under a Curve and Integration**

1) I can approximate the area under a curve using rectangles.

2) I can approximate the area under a curve using definite integrals and integration.

**12.6 The Fundamental Theorem of Calculus**

1) I can find antiderivatives.

2) I can apply the Fundamental Theorem of Calculus.

3) I can evaluate definite and indefinite integrals.