

## Unit 2 - Functions and Rate of Change

### Topics for the TEST !

- 1) Basic Functions (  $y = x^2$ ,  $y = x^3$ ,  $y = x^4$ ,  $y = |x|$ ,  $y = \sqrt{x}$  )
- 2) Transformations, description of transformations in words and Mapping Notation
- 3) Graphing functions
- 4) Function Notation
- 5) Inverses of Functions (inverse points, inverse of equations, inverse of graphs)
- 6) Piecewise Functions
- 7) Average Rate of Change (slope of secant line)
- 8) Instantaneous Rate of Change (slope of tangent line)
- 9) Increasing/Decreasing Functions vs Increasing/Decreasing Rate of Change
- 10) Concavity (concave up vs concave down)
- 11) Identifying Max/Min points using instantaneous rate of change (looking for slope of tangent line = 0)

## Unit 2 - Functions and Rate of Change

### Topics for the TEST !

- 1) Basic Functions (  $y = x^2$ ,  $y = x^3$ ,  $y = x^4$ ,  $y = |x|$ ,  $y = \sqrt{x}$  )
- 2) Transformations, description of transformations in words and Mapping Notation
- 3) Graphing functions
- 4) Function Notation
- 5) Inverses of Functions (inverse points, inverse of equations, inverse of graphs)
- 6) Piecewise Functions
- 7) Average Rate of Change (slope of secant line)
- 8) Instantaneous Rate of Change (slope of tangent line)
- 9) Increasing/Decreasing Functions vs Increasing/Decreasing Rate of Change
- 10) Concavity (concave up vs concave down)
- 11) Identifying Max/Min points using instantaneous rate of change (looking for slope of tangent line = 0)