

Exponential and Logarithmic Functions PBA Project Rubric Name: _____

Algebra 2 Spring 2016

Ms. Lozada

Band: _____

Research: _____/12

- Each “blank” for College, Bringin’ Home the Bacon, and Home is Where the Heart is 1 point

Part 1: College: _____/20

Scenario 1 _____/10

- 1 point for Present Value in November
- 1 point for monthly loan rate, r
- 1 point for number of pay periods, n
- 3 points for substituting values of r , PV , and n into Present Value Payment Formula correctly
- 2 points for monthly loan payment value, A
- 1 point for total amount paid over 10 years
- 1 point for total interest paid over 10 years

Scenario 2 _____/10

- 1 point for Present Value in November
- 1 point for monthly loan rate, r
- 1 point for number of pay periods, n
- 3 points for substituting values of r , PV , and n into Present Value Payment Formula correctly
- 2 points for monthly loan payment value, A
- 1 point for total amount paid over 10 years
- 1 point for total interest paid over 10 years

Part 2: Bringin’ Home the Bacon _____/10

- 1 point for initial principal, P
- 1 point for annual rate expressed as a decimal, r
- 1 point for n times per year
- 3 points for substituting values of P , r , and n into Compound Interest Formula correctly
- 4 points for correct 10th, 20th, 30th, and 40th year salaries (1 point each)

Part 3: Home is Where the Heart Is _____/24

Scenario 1 _____/10

- 1 point for Present Value (i.e. mortgage amount)
- 1 point for monthly loan rate, r
- 1 point for number of pay periods, n
- 3 points for substituting values of r , PV , and n into Present Value Payment Formula correctly
- 2 points for monthly mortgage payment value, A
- 1 point for total amount paid over 30 years
- 1 point for total interest paid over 30 years

Scenario 2

_____/10

- 1 point for Present Value (i.e. mortgage amount)
- 1 point for monthly loan rate, r
- 1 point for number of pay periods, n
- 3 points for substituting values of r , PV , and n into Present Value Payment Formula correctly
- 2 points for monthly mortgage payment value, A
- 1 point for total amount paid over 30 years
- 1 point for total interest paid over 30 years

Analysis

_____/4

- 2 points for each down payment (1 point per down payment)
- 1 point for difference between the two down payments
- 1 point for how much saved over total term of loan

Part 4: Retirement

_____/24

- 2 points for average annual 401(k) return rate (1 point for rate, 1 point for source)
- 1 point for monthly income
- 1 point for monthly income after paying for housing
- 1 point for monthly contribution to retirement

Part A

_____/12

- 1 point for annual rate expressed as a decimal, r
- 1 point for number of pay periods per year, n
- 4 points for substituting values of P , r , n and t into Future Value Formula correctly
- 6 points for correct Future Value amounts for 35, 40, and 45 years (2 points per amount)

Part B

_____/12

- 1 point for New Future Value
- 1 point for annual rate expressed as a decimal, r
- 1 point for number of pay periods per year, n
- 4 points for substituting values of FV , r , n and t into Future Value Formula correctly
- 2 points for solving for regular monthly payment, P , correctly
- 3 points for how figures from A and B compare

Part BONUS: What about Taxes??

+_____/10

- +1/2 point for tax rate bracket
- +8 points for taxes table
- +1 point for actual take-home income (pg. 9)
- +1/2 point actual take-home income after paying for housing

Part 6: Reflection

_____/10

- 5 points for reactions to work
- 5 points for what does it make you think for your future
- Each detail earns 1 point (so make your reflections detailed!)

Grade: ____/100