**Algebra 2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_**

Unit 5, Test 1 Review– Exponential and Logarithmic Functions

Note: Page 1 and 2 of this review are to all be completed **without** a calculator. All problems on page 3 are to be completed **with** a calculator.

1) Jack evaluated and solved the following logarithm problems. Some are correct and some are incorrect. Analyze each problem Jack did. If the problem is correct, justify the process Jack used. If the answer is incorrect, then explain what he did wrong and correct the mistake if possible. (3 points each)

|  |  |  |
| --- | --- | --- |
| a) Evaluate: | b) Solve: | c) Solve: |
| a) Answer: 4 | b) Answer: *x* = 4 | c) Answer: |
|  |  |  |

1. Write the expression as an exponential expression:
   1. b.
2. Write the expression as a logarithmic expression:
   1. b.
3. Condense the expressions:
   1. b. 4
4. Expand the expressions:
   1. b.
5. Evaluate the logarithm:
   1. b. c.
6. Solve the exponential equation:
   1. b.
7. Solve the logarithmic equation. Remember to check for extraneous solutions.
   1. b.

c. d.

1. Simplify each expression, show supporting work below:
   1. b.

**Algebra 2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_\_\_**

Unit 5, Test 1 – Exponential and Logarithmic Functions

Calculator Section

11) Solve the equations (round to three decimal places if necessary):

a) b)

c) d)

10) Approximate the value of to the nearest hundredth.