**Honors- Math 3** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 5 Review

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Find the inverse of and graph both functions. Then, state the domain, range, and asymptote of both.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Domain** | **Range** | **Asymptote** |
|  |  |  |  |
|  |  |  |  |

 | 1. Find the inverse of and graph both functions. Then, state the domain, range, and asymptote of both.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Domain** | **Range** | **Asymptote** |
|  |  |  |  |
|  |  |  |  |

 |
| 1. You invest $2,000 at 5% interest compounded monthly. How much will you have in your account after 4 years?
 | 1. You invest $5,000 at 8% interest compounded continuously. How much will you have in your account after 5 years?
 |
| 1. You want to double your investment of $3,500. You invest at 3%. How long will it take to double your investment if interest is compounded daily?
 | 1. You deposit $6,200 into an account that earns 2% interest compounded continuously. How long will it take the account to triple?
 |

**Solve each equation. Round each answer to the hundredths.**

|  |  |
| --- | --- |
|  |  |
|  |  |
| 1. Evaluate the following expressions:
 | 1. Simplify
 |
| 1. How would you rewrite the function that had been translated right 3 units and down 4 units?
 | 1. Condense the following logarithms:
 |
| 1. Rewrite the equation in natural log (ln) form.
 | 1. Rewrite in exponential form.
 |

Graph the following piece-wise functions. Then, state the domain and range for each.

|  |  |
| --- | --- |
| 1. *f(x)* =

 | 1. *f(x)* =

 |