

Name: _____

This quiz covers: 1.1, 1.2, 1.3, 1.5 and 1.6.

Directions: Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Sketch a rough graph of the temperature of an oven given the following events. The oven begins at room temperature. The oven is then preheated to 400 degrees Fahrenheit. Once heated, brownies are put in, and cooked for 20 minutes. For fear of burning, the temperature is lowered to 350 degrees Fahrenheit and let to cook for 10 additional minutes. The brownies are then removed and the oven turned off. (For times not given, make reasonable approximations.)

2.) Plot the graph of $f(x) = 2(x - 1)^2 - 3$ without plotting individual points.

Name: _____

3.) Compute the inverse of: $f(x) = 2 + e^{1-x}$. Be sure to state the domain and range.

4.) Find x given $\log_3 x = 4$.

Name: _____

Answers

- 1.) Begin at room temperature, raise in temperature to 400 degrees. Stay for 20 minutes. Drop to 350 degrees and stay until 10 minutes pass. Slowly drop back to room temperature.
- 2.) A parabola that is doubled vertically (stretched) and moved right 1 and down 3.
- 3.) $f^{-1}(x) = 1 - \ln(x - 2)$
- 4.) $3^4 = 81$.