

Math 1a – Quiz 2

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There are 5 questions. Each question is worth 3 points.

1. (a) Graph the following function: $f(x) = |x^2 - 1| - 1$.

(b) What is the *range* of $f(x)$?

2. The atmospheric pressure on the surface of Venus is 90 atmospheres. Above the surface, the pressure decreases by 3 atmospheres for every 5 miles of altitude. (One atmosphere is the air pressure on the Earth's surface.)

(a) Write an equation for atmospheric pressure as a function of altitude.

(b) Draw a graph of the atmospheric pressure as a function of altitude. Don't forget to label your axes.

3. The graph of f is given. Use it to graph the following functions:

(a) $1 - f(x)$

(b) $f(1 - x)$

4. Find the exponential function $f(x) = Ca^x$ whose graph is given.

5. Find a formula for the inverse of the function:

$$y = \sqrt[3]{4 + e^{x^2}}$$