Worksheet §12.1

1. For each of the following, give a 2-line notation definition for the function. Pick a simple but appropriate codomain.

    (a) Determinant, applied to 2×2 matrices.

    (b) The natural log.

    (c) The binomial symbol.

    (d) The sign of a number.

    (e) The derivative of a function.

    (f) The definite integral of a function from 0 to 1.

    (g) The sum of 2 numbers.

2. Give a rigorous definition for a function passing the "horizontal line test". Use $y = x^2$, $y = e^x$ as examples to test your definition (or any other examples you would like!) Your answer should have quantifiers in it.