

# 1 Functions

**Absolute Value Function**

**Logarithms**

## Polynomial Functions (4.1.5)

Constants ( $P_0$ )

Linear Functions ( $P_1$ )

Quadratic Functions ( $P_2$ )

Cubic Functions ( $P_3$ )

## Equality of Functions (4.1.6)

$$f(x) = g(x)$$

## Encoding and Decoding Functions (4.2)

### Onto Functions (4.2.2)

### One-to-One Functions (4.2.3)

### One-to-One Functions (4.2.3)

$f(x)$ , must be *One-to-One* and *Onto*

## Exponential and Logarithmic Functions (4.3)

The Laws of Logarithms

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- $\log_b(x^y) = y \times \log_b(x)$
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## Comparing the size of Functions (4.4)

Using O-notations

### Power Notation (4.4.2)

### Section 8 Exercises

- $8^{\frac{1}{3}}$  Recall  $a^{\frac{b}{c}} = a^{\frac{b}{c}}$
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