An Algebraic Approach to Programming

1 + 1 = ?

1 + 1 + 0 + 0 + 0 = 1 + 1

$$1 * 1 * 1 * 2 = 2$$

$$2^3 + 2^2 + 2^1$$

Independent Value in Term

Dependent Value in Term

$$1 + 2 + 3 + (4 + 5) = 15$$
$$1 + 2 + (3 + 4) + 5 = 15$$
$$1 + (2 + 3) + 4 + 5 = 15$$

Associative Across

$$1 + 1/(1/(1/(1/1))) = 1 + 1$$

Associative in Depth

$$1 + 1/(1/(1/1)) + 1$$

$$[1] + [[1]/[[1]/[[1]/[1]]]] + [1]$$

$$[] \ @ \ [[]@[[]@[[]@[]]]] \ @ \ []$$

Infinite List of Trees of Trees