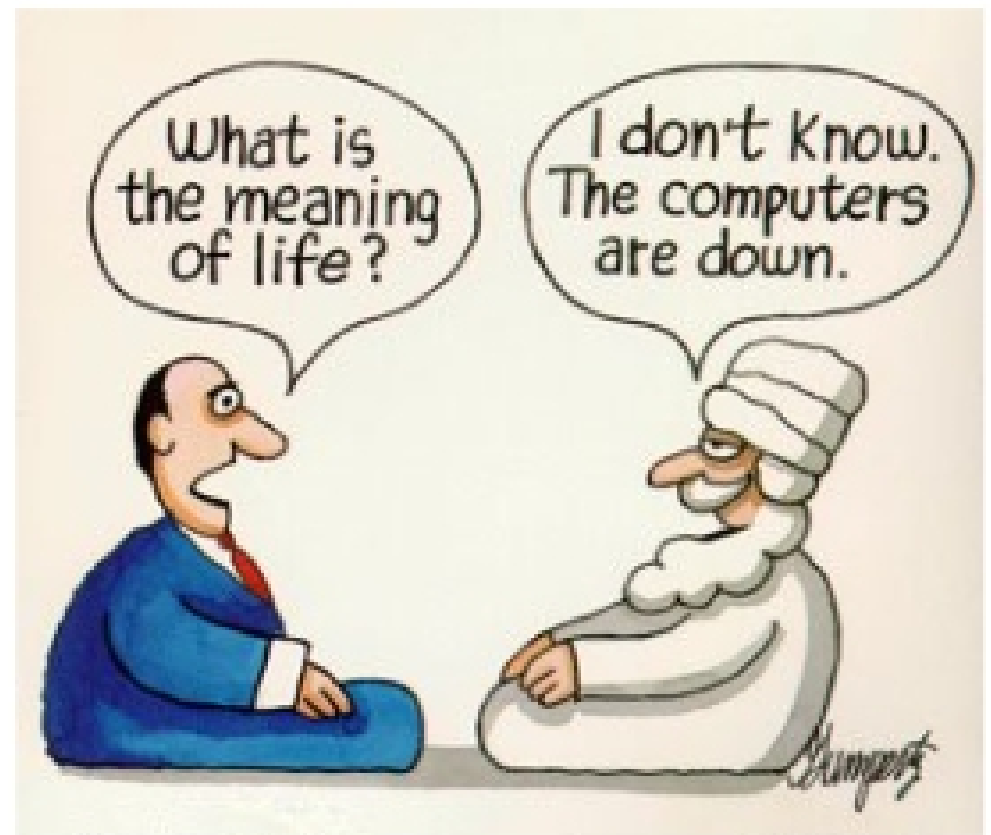


Class 32: The Meaning of Truth



Source: <http://www.treasure-troves.com/eric.html>



CS200: Computer Science
University of Virginia
Computer Science

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Menu

- Lambda Calculus Review
- How to Prove Something is a Universal Computer
- Making “Primitives”

Lambda Calculus Review

$term ::= variable \mid term \ term \mid (term) \mid \lambda \ variable . \ term$

Parens are just for grouping, not like in Scheme

α -reduction (renaming)

$$\lambda y. M \Rightarrow_{\alpha} \lambda v. (M [y \mapsto v])$$

where v does not occur in M .

β -reduction (substitution)

$$(\lambda x. M)N \Rightarrow_{\beta} M [x \mapsto N]$$

$$(\lambda f. ((\lambda x. f (xx)) (\lambda x. f (xx)))) (\lambda z. z)$$