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Problems 6.4, 6.8, 6.19

Chapter 6 exercises

6.4) Translate to Postfix and Prefix notation

$$[-b + \text{sqrt}(b*b - 4*a*c)] / 2*a$$

Do you need a special symbol for unary negation?

A) You do not need a special symbol for unary negation. Instead let the "-" symbol mean subtraction when 2 operands are on the stack and negate when 1 operand is on the stack (for postfix)

Postfix: $b - b \quad b * 4 \quad a * c * - \text{'sqrt'} + 2 \quad a * /$

Prefix: ~~$b \text{'sqrt'} - b * 4 \quad a \quad c * 2 \quad a$~~

$$/ + - b \text{'sqrt'} - * b b * 4 a c * 2 a$$

6.8) Languages that employ a reference model of variables also tend to employ garbage collection. Coincidence?

A) This is not a coincidence. A language that uses the reference model of variables will end up creating multiple references to the same object. Garbage collection of these references becomes essential to keep track of useful references and to help determine when an object will no longer need to be referenced.

6.19) See C++ file submitted for program 2

