**CLI** stands for “Command-Line Interface”, an application that executes user commands from a command line. As before, **Unicalc** is a calculator that includes physical and other units, rather than just numbers. Use your Unicalc API from the previous assignment, or the one in the solution set, to construct a unit calculator based on a read-eval-print loop (REPL), which reads an S expression from the user, then prints the result. The following are legitimate expressions (defined recursively):

- a numeral (integer, rational, or scientific)
- a symbol not beginning with $, which will be interpreted as a unit (such as mile, meter, second, etc.)
- a symbol beginning with $, which will be interpreted as a variable that has a Quantity as its value.
- $(/ N D)$ where $N$ and $D$ are expressions, returning the quotient $N$ divided by $D$, as a normalized Quantity
- $(\ast E_1 E_2 \ldots)$ where $E_1 E_2 \ldots$ represents zero or more expressions, returning the product of its arguments, as a normalized Quantity. The result for zero arguments is the Quantity 1.
- $(= V E)$ where $V$ is a variable and $E$ is any expression. This sets the variable $V$ to have the normalized value of the expression $E$.

If a Quantity has an empty numerator and denominator, it should be rendered as just the multiplier. Here are some examples of input to your CLI and the corresponding output:

```
> 3.14
3.14

> / mile
(1609.349259966 (meter) ())

> / (\ast acre foot) year
(3.911332681348173e-05 (meter meter meter) (second))

> / joule (/ (\ast kg m m)(\ast second second))
1

> = $x (\ast acre foot)
$x$ is (1233.41987438996 (meter meter meter) ())

> / $x (\ast meter meter meter)
1233.41987438996
```