

# Evaluation

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# The Great Rule of Evaluation

- 1. Evaluate the operator to get the procedure;
- 2. Evaluate the operands one-by-one, from left to right to get the arguments;
- 3. Apply the procedure to the arguments to compute the value of the application.

$$\begin{array}{ccc} (+ & 3 & 7) \\ \downarrow & \downarrow & \downarrow \\ \text{<add>} & 3 & 7 \\ \hline 10 \end{array}$$

$$\begin{array}{ccc} (+ & 17 & (* & 3 & 4)) \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ \text{<add>} & 17 & \text{<multiply>} & 3 & 4 \\ \hline & & 12 \\ \hline 29 \end{array}$$

reads  
evaluates  
prints

\* (+ 3 7) ←  
10  
\*

REPL

# Application

