

# Prolog cheat sheet

Facts:

```
sunny.  
mortal(socrates).  
loves(john, mary).  
likes(_, ice_cream). /* _ means "don't care" */
```

Rules:

```
hot :- summertime.  
mortal(X) :- man(X).  
loves(chuck, F) :- female(F), rich(F).  
smaller(x, y) :- larger(y, x).
```

Queries: Same format as facts or rules.

Strings: Use single (not double) quotes. To put a single quote inside a string, type it twice, or backslash it.

Lists:

```
[] is the empty list.  
[1, 2, 3] is the list whose head is 1 and whose tail is [2, 3].  
[H | T] is the list whose head is H and whose tail is T.
```

Operators:

```
, and  
; or  
\+ not  
= unification  
is evaluate the right hand side, then try to unify  
== evaluate boths sides, then try to unify  
! cut
```

Built-in predicates:

```
consult('path to file')  
write(value)  
nl  
assert(new fact)  
retract(old fact)
```