Chapter 1 Problems

**1.8**

It is possible to construct eight atomic sentences with the first FOL, and 24 with the second FOL.

To express all the sentences possible with the second FOL with the first FOL we need to add to the latter one predicate GaveClaire and one name Scruffy.

**1.16**

**Function Symbols**

Favorite(a)

**Predicates**

BetterActor(a,b)

**Individual Constants**

Nancy

Sean

Max

1. Harrison = Favorite(Nancy)
2. BetterActor(Favorite(Nancy), Sean)
3. BetterActor(Favorite(Nancy), Favorite(Max))
4. Favorite(Favorite(Claire)) = Brad
5. Sean = Favorite(Sean)

**1.22**

1

0 + 1

1×1

1×(1×1)

1×(1×1×1)

etc