Lecture 5.5 Cosmology I

Olbers' Paradox
If the universe is ___________ and static, then according to Olbers' paradox, the night sky should be ______________________.

But the visible universe isn't infinite in age. This solves Olbers' paradox. We are one galaxy among some 100 _____________ other galaxies.

Basic Cosmology Principles
- the universe is _____________, it looks the same in all directions
- the universe is _____________, it is the same pretty much everywhere
- there is no preferred observation frame (ie the _____________ Principle)

Hubble's Law is an expression consistent with the model of the expanding universe. Hubble's Law is:

When the universe it expands, it does not expand from a center point but everywhere at once.

This expansion causes a redshift. This redshift is very different from Doppler Shift.

Big Bang
- universe started out very __________ and very __________
- universe starts to expand
- as universe expands it gets less dense and ____________

As the stuff from the early universe cools, gravity causes it to condense. Eventually galaxies and structure form.