## ASTR 2000 HOMEWORK #9: NOT DUE, for your review and understanding only

NAME: \_\_\_\_\_

- 1. (15 points) A supernova is due to the massive explosion that occurs at the "death" of a star much bigger than our Sun. Several ancient cultures (notably the Chinese) noticed and recorded these supernovae (plural of supernova).
- a). (6 points) Briefly describe the visual appearance of a supernova, including 1. How bright they appear, 2. How frequently they have occurred through history and 3. How long they are visible to the eye alone in the day and night time sky.

b). (4 points) Describe the astrological interpretation of the appearance of a supernova that was made by Chinese astronomers/astrologers and so the importance to Chinese government and culture.

c). (3 points) Why is it unlikely that the "Star of Bethlehem" was a supernova?

d). (2 points) The "Star of Bethlehem" may have been a close planetary conjunction, whose importance was interpreted by Babylonian astrologers. Describe what is meant by a planetary conjunction

- 2. (15 points) We have been studying the general configurations of constellation patterns of several ancient and indigenous cultures: Navajo, Lakota, Pueblo, Greek/Babylonians, Chinese, Australian Aboriginal, Inca, etc. Rather than focusing on individual constellations and their lore, we have looked for overall patterns in these depictions (types of depictions; e.g., all animals, heroes and heroines, social status, geometric shapes, etc), level of completeness (all or most stars depicted as part of constellations compared with few constellations) and the use of bright star and dark constellations.
- a). (5 points) What are "dark constellations" and why do only southern hemisphere cultures have them?

b). (5 points). Think of the different perspectives on the sky that peoples living near the equator might have compared to peoples living much further to the North. Describe any differences in constellation configuration that might exist and justify your statements. You are welcome to use examples from the class if that helps.

c). (5 points) Think of the different perspectives on the sky that an egalitarian (relative equality of political, social and economic rights) society and a more autocratic (ruler has considerable, if not, absolute power) society might have. Describe any differences in constellation configuration that might exist and justify your statements. You are welcome to use examples from the class if that helps.