Reach for the Stars 3/15/08

Using the SC003T constellation chart fill in the blanks:

Object	Type of Object	Constellation	RA	D
1. LMC	Irr Galaxy	Dorado/Mensa	05h 24m	-69 degrees
2. SMC	Irr Galaxy	Tucana	00h 53m	-73 degrees
3. ////////	//////////	Centaurus	14h 00m	-45 degrees

4. What star on your list is located in the constellation in question 3? Proxima Centauri

5.Why can't you find it on the SC003T chart? It's too dim. Visual Magnitude less than 6 (11.05 v)

6. Where would you find this star on an H-R Diagram? Main Sequence Red Dwarf Lower right hand corner

7. How many stars orbit in this system? 3

Using the SC002T constellation chart fill in the blanks:

Object	Type of Object	Constellation	RA	D
8. Algol	star	Perseus	03h 08m	+41 degrees
9. Polaris	star	Ursa Minor	02h 32m	+89 degrees
10. Capella	Star	Auriga	05h 17m	+46 degrees

11. The star in question 8 is a variable star – what type of variable is it? Eclipsing Variable

12. What does that star's name mean? The demon

13. How many stars orbit in this system? 3

14. Explain the Algol Paradox (if you don't know what the Algol Paradox is– Read the Star section!! Algol A is a 3.7 solar mass B8 star on the main sequence. The higher the mass of a star the shorter it's lifetime as it's fuel is used much faster. Algol B is a dying K giant star but at only .81 solar masses, it is the LESS massive of the two. The dim companion has lost a great deal of mass to it's closely orbiting partner.

15. Polaris is a variable star – what type of variable is it? Cepheid

16. How many stars orbit in the Polaris system? 3

17. How many stars orbit in the Capella system? 4 - 2 sets of doubles the main set are G0 and G8 giants orbiting about 2/3 AU apart. The other pair are class M red dwarfs close to a light year away from the main pair.