Reach for the Stars

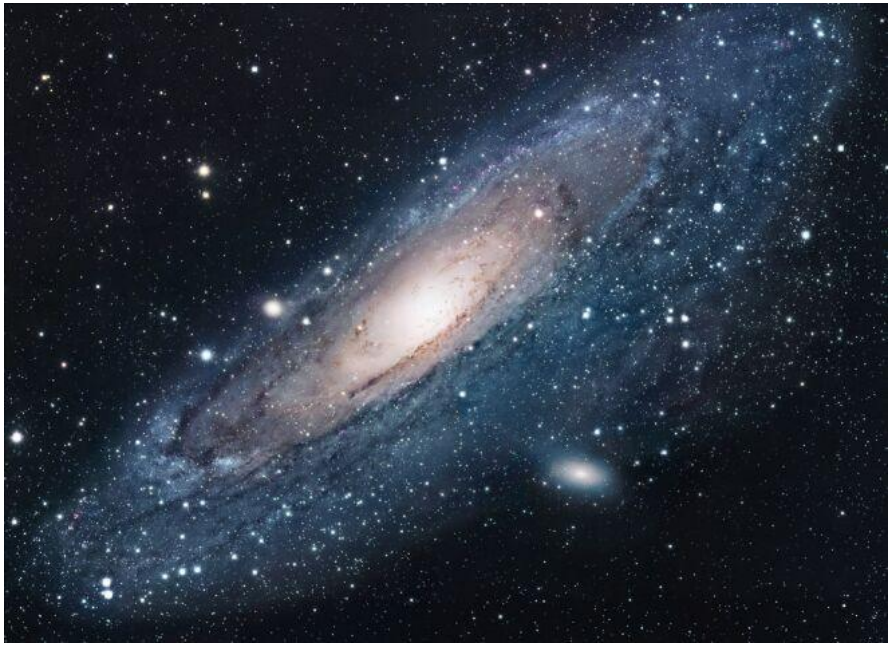
Camas High School

Division B Invitational

2011

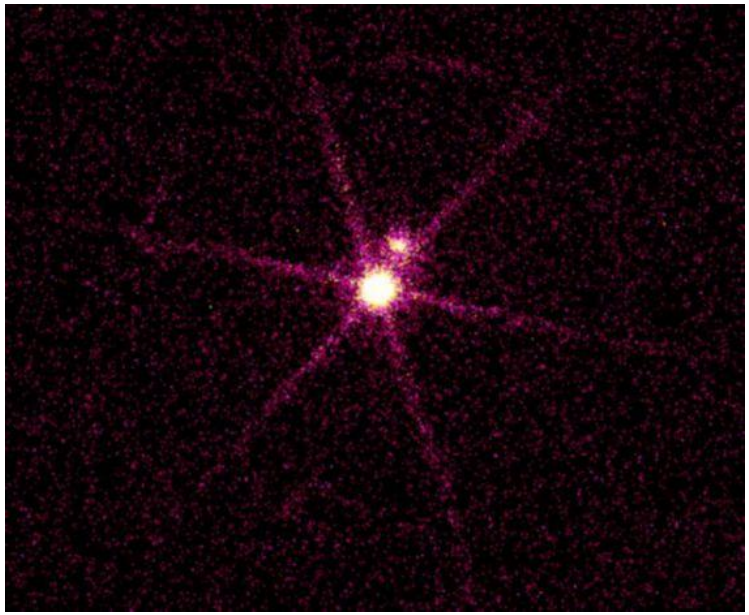
Part I

3 Minutes



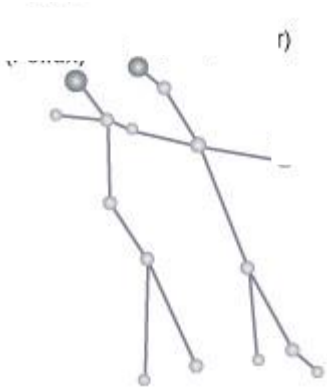
- 1. What is the name of this galaxy?
- 2. What is the general shape of the galaxy?
- 3. What constellation is this galaxy in?

2 Minutes



- 4. This is the brightest star in the night sky. Name it.
- 5. What Greek letter is used to designate the brightest star in a constellation?

5 Minutes

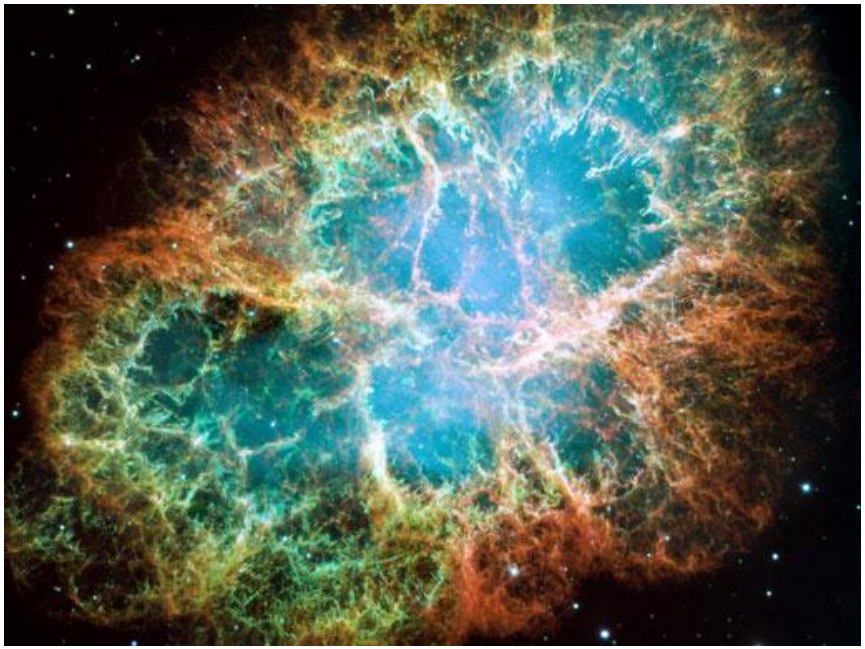


- 6. What is the first constellation?
- 7. What is the common name of the brightest star in the first constellation?
- 8. What is the second constellation?

5 Minutes

- 9. What is the Messier number for this object?
- 10. What is thought to give this galaxy its very distinctive spiral pattern?
- 11. What are the bright red clouds of ionized gas called?

5 Minutes

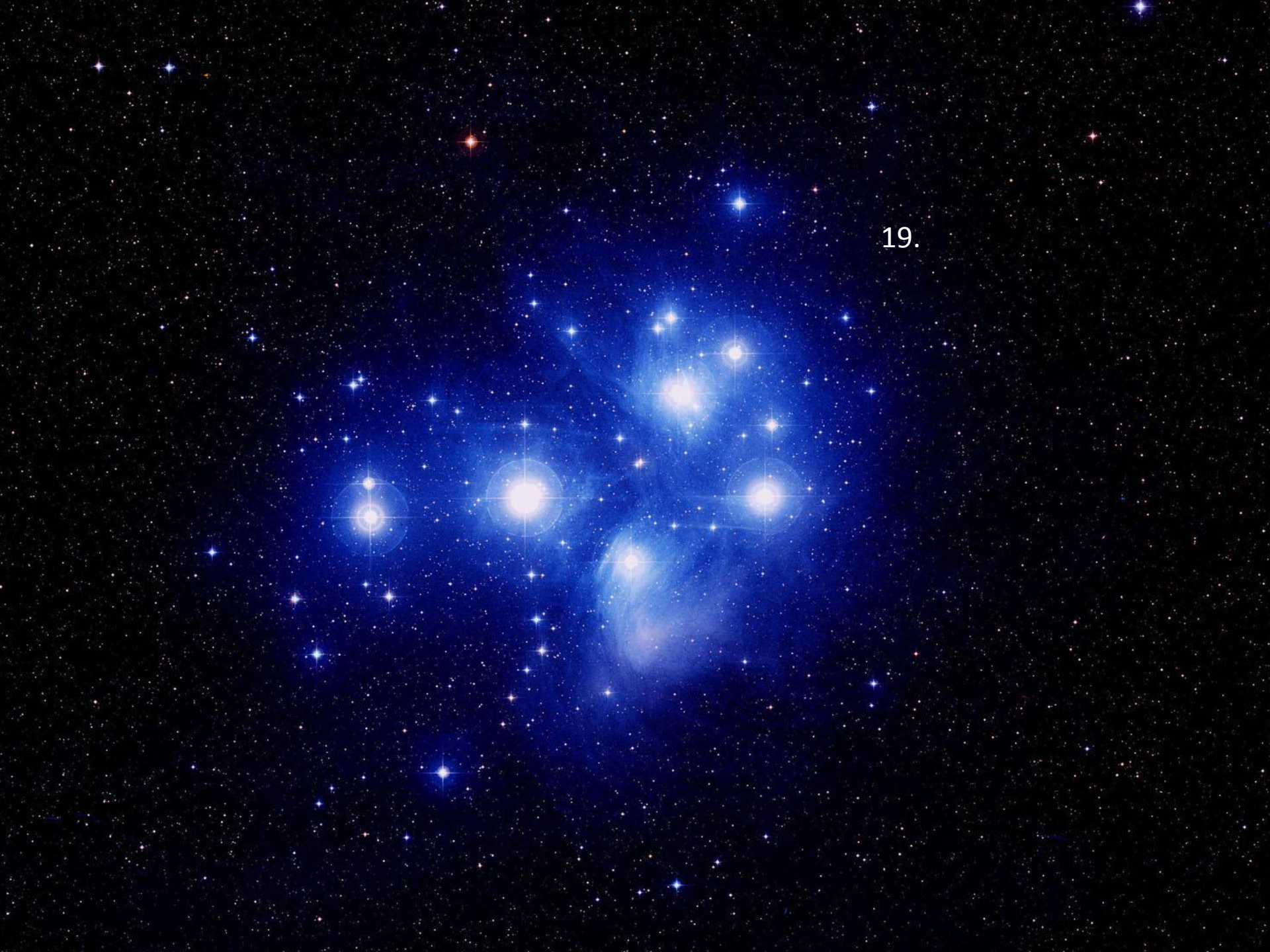


- 15. Name this object
- 16. This object is the remnant of what cataclysmic event?
- 17. What is at the center of this object?
- 18. The blue region in the middle is produced by what type of radiation?

Part II

Each slide will be shown for 30 seconds.

Identify the constellation, star, or deep-space object in the image.



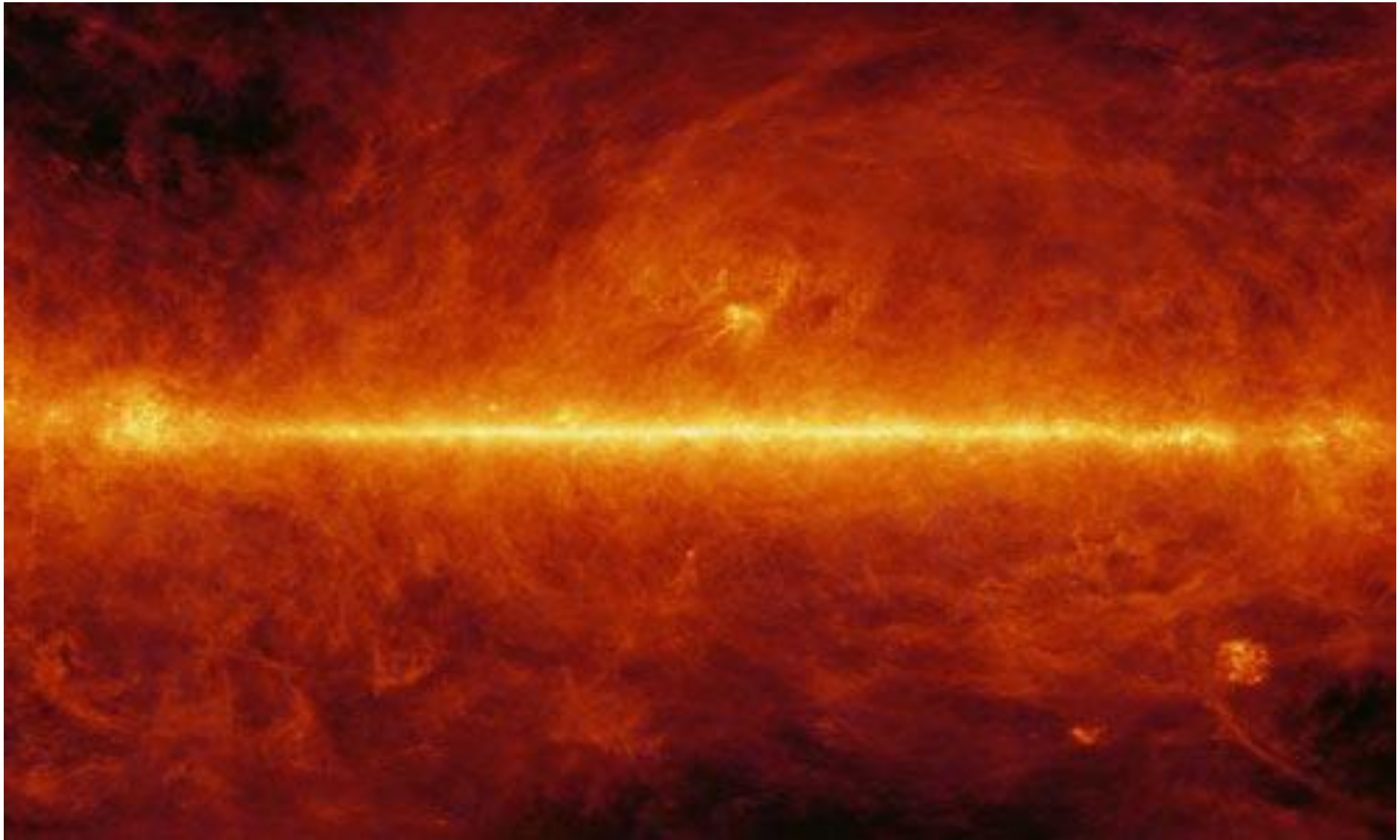
19.

20.

21.

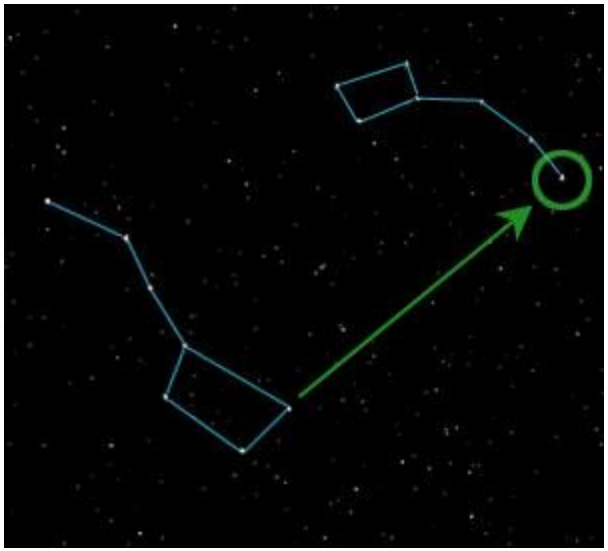

© Anglo-Australian Observatory/Royal Observatory, Edinburgh.

22.

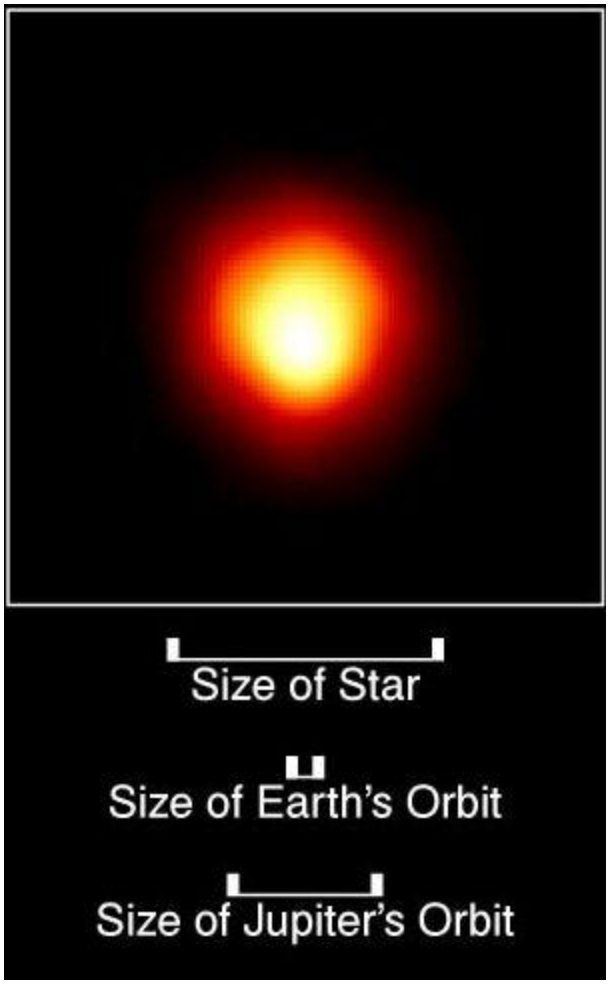


23.

24.



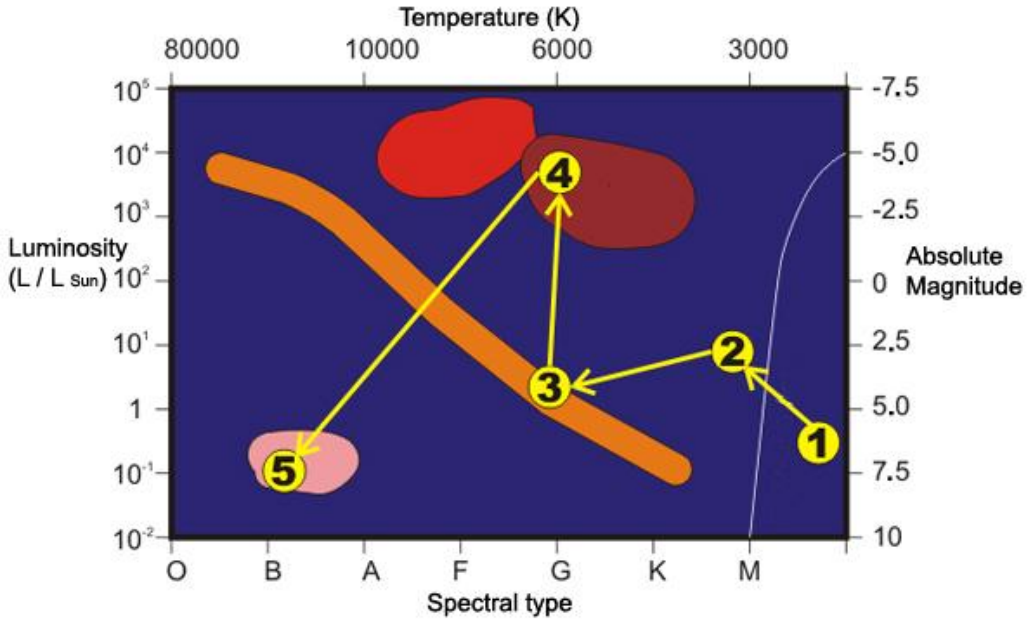
25.

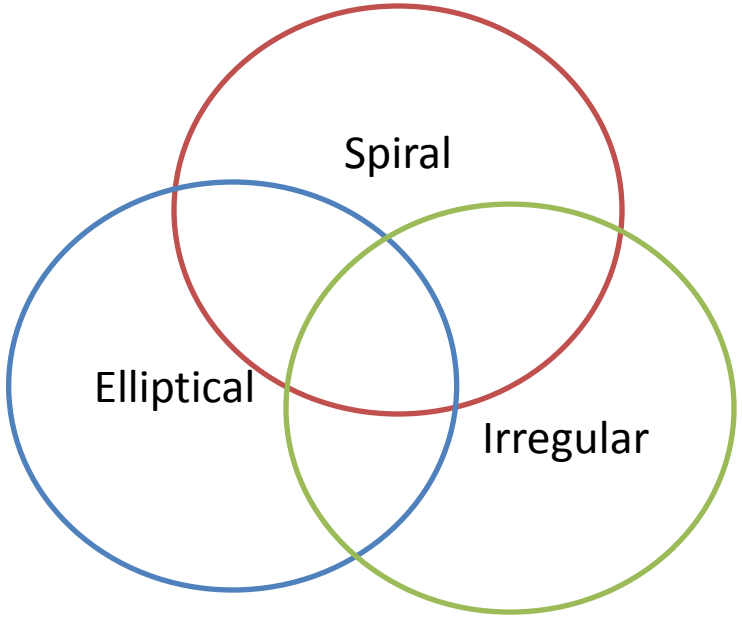


Part III

Interpretive Task and Extended Answers

25 Minutes





Galaxy morphology

26. The reason the evolutionary track shown on the H-R diagram above does not pass through the bright red area is that the star the track represents does not have sufficient _____.
27. If our sun were to be plotted on this H-R diagram, it would be found closest to which circled number?
28. What color is a star with spectral type B?
29. Approximately what is the mass of this star for most of its life, in solar masses?
30. What general class of stars does the pink area represent?
31. On the back of your paper, give 3 similarities and 3 differences between open clusters and globular clusters, and give an example of each type of cluster. (8 points)
32. Copy and complete the Venn Diagram so that each region contains at least 1 characteristic. (7 points)