

STAR REVIEW /81pts

NAME _____ HR _____

1. How does a star make energy?
2. How far does light travel in a year? (miles)
3. How do we know what stars are made of if we can't take a sample?
4. Put the steps in order:
 - Compare the dark lines to the spectrum lines of an atom
 - Point a spectroscope at a star
 - If all lines in the element match, that type of element is in the star
 - Record the black lines in the rainbow spectrum
5. A star seems really bright, but it isn't. It's just close to us. What type of brightness is this?
6. A star is dim, but in fairness it is VERY far away and is massive. What is it's absolute brightness? (dim or bright)
7. Put the steps in order:
 - Friction in core causes temperature to reach 10,000,000 c
 - A **protostar** forms- it is not fusing yet, just hot
 - Nebula (cloud of dust and gas) collapses under its own gravity
 - fusion begins and a star is born

8. What are the 3 ways stars are found? Define each.

Term	definition

9. Fill in the star colors:

Star temperature

3500 degrees c= _____

5500 degrees c= _____

7500 degrees c= _____

11,000 degrees c= _____

20,000 degrees c= _____

10. Which elements are made in stars?

11. Which elements are made in supernovas?

12. COMPLETE THE CHART:

star	Size	Brightness	Temperature	color	How long they last
Red dwarf					
Sun class					
Blue giant					

13. Why do blue giants only last millions of years?

14. How does a red dwarf star die?

15. How does a sun class star die?

16. Which stars are in the main sequence?

17. What can you say about the size of main sequence stars?

18. If the force of fusion is winning, what will a star do?

19. If the force of gravity is winning, what will a star do?

20. How do you know a star is "dying?"

21. What do blue giants become when they die? (2 possible things)

Big ones =

Smaller ones = first _____, then a _____ star

22. When a supernova occurs, what type of star might form in the center?

23. How does a neutron form?

24. Put in order:

- energy transforms into heat and light at the surface
- hydrogen and hydrogen fuses to make helium in the core
- tiny bits of matter are transformed into energy
- huge amount of energy is released

25. Forces in stars

_____ pushes out

_____ pulls in

26. When forces are balanced star is " _____ "

27. When mass decreases there is less gravity, thus fusion _____ it

28. When fusion slows down, gravity forces start to win again and _____ the star

GALAXY REVIEW

1. Define galaxy – _____

2. The farther away a galaxy is the _____ it is moving away from us.

3. About how many stars are in our galaxy? _____

4. Write the name of the galaxy type below the picture

			
_____	_____	_____	_____

5. How do we know the universe is expanding? _____

6. Galaxies move in 2 ways. What are they?

1 _____

2 _____

7. If a space object is moving away from us, how does it appear (in terms of color)?

GALAXY DETAILS:

	Shape?	Age?	How common?	Types of stars in it?
elliptical				
pinwheel spiral				
barred spiral				
irregular				

8. What shape do all galaxies eventually become?
9. How many stars can a very large galaxy have?
10. When you look at a very distant galaxy, what type will it most likely be?
11. Why is the Milky Way named the way it is? (no need to tell the whole story).
12. What kind of galaxy do we live in?
13. How wide and thick is our galaxy?
14. Where are we located in our galaxy?
15. What is the name of our galaxy "neighborhood?"
16. What is the name of our galaxy "city?"
17. If all the superclusters are added together, what name do we give that?
18. If all the filaments are added together, what name do we give that?
19. What is the term given to the start of the universe?
20. What evidence do we have that the universe had a beginning?
21. About how long ago did the universe begin?
22. What is the name of the theory that says gravity will pull everything back into 1 point once again?
23. Given that the universe's currently estimated density is BELOW critical density, and the fact that galaxy expansion is SPEEDING UP, is the big crunch likely to happen?