STAR NOTES- CH 25 NAME_____HR_____ /78

STAR- hot glowing sphere of _____that produces energy by _____

1] _____**year**—distance light _____in a year
(_____ trillion km, _____ trillion miles)

2] Star brightness
A) **Absolute**_____- the _____brightness of a star
B) **Apparent** _____—how bright a star _____to be

3] Formation of stars
A) _____ (cloud of dust and gas) collapses under its own _____
B) A _____ forms- it is not fusing yet, just hot
C) _____in core causes _____to reach 10,000,000 c
D) _____begins and a _____is born

4] How stars are found
A) _____-by itself (our sun)
B) _____ _____- 2 stars orbiting each other
C) _____ _____- 100's or 1000's of stars held together by _____ (naked eye sees this as 1 point of _____)

5] Star composition
A) _____ _____**spectrum analysis**- compare a star's _____to an _____ spectrum (its fingerprint)
B) The elements up to _____are made in stars
C) The elements heavier than iron are made in _____explosions

6] Star temperature
A) _____degrees c= _____
B) _____degrees c= _____
C) _____degrees c=_____
D) _____degrees c= _____
E) _____degrees c= _____

7] <u>Hertzsprung _____ diagram</u> –see handout

A) <u>Star life</u>

1) _____dwarf- lasts _____of years (small car- small tank but great gas mileage)
2) Sun _____-last _____of years (mid sized car- medium tank, medium mileage
3) _____giant- _____of years (gas guzzler- huge tank of fuel, but uses it up very quickly)

B) <u>Star death</u>

1) Red dwarf- shrink into a _____dwarf, then _____dwarf
2) Sun class- swell into red _____then shrink into a white _____, then black _____
3) Blue giant- swell into _____giant then explode into a _____ performing **nucleosynthesis**- makes all _____ past iron
   a) Small ones blast _____completely (new _____)
   b) Larger ones make a new nebula with a _____star in the center
   c) Largest ones shrink into a _____ hole

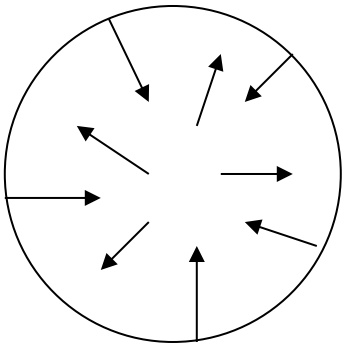
8] How stars work

A] hydrogen and _____fuses to make _____in the core

B] tiny bits of _____are transformed into _____

C] huge amount of energy is _____

D] energy transforms into _____and _____at the surface



9] Forces in stars

C) _____ _____out

D) _____ _____in

- When forces are _____star is "_____"
- When mass _____there is less _____, thus fusion _____it
- When _____slows down, gravity forces start to _____again and _____the star