

# ASTRONOMY

## REVIEW HW

Use ESRT

1. What is **Gravity**? Formula ? \_\_\_\_\_
  - 1a. How does distance affect it?      Mass?
  
2. Arrange in order of increasing size: **universe, planet, galaxy, star**  
\_\_\_\_\_
  
3. Electromagnetic Spectrum-Arrange the forms of radiation in order of increasing size:  
**radio waves, visible light, gamma rays, microwaves, x-rays, ultraviolet** \_\_\_\_\_  
\_\_\_\_\_
  
4. Edwin Hubble discovered that *spectral analyse* of stars showed a (**RED** or **BLUE**) shift, and claimed it was evidence that the Universe is expanding.  
(remember-the longest wavelengths of visible light-stretched out –the **Doppler Effect**-car radio driving by sounds funny)
  
- 4 a. What is the Big Bang theory? Age of the universe? \_\_\_\_\_  
\_\_\_\_\_
  
5. What are stars made of? \_\_\_\_\_ how do we know? \_\_\_\_\_
  
6. What 2 characteristics are stars classified by? \_\_\_\_\_
  
7. What color Stars are the hottest? \_\_\_\_\_ coolest? \_\_\_\_\_  
(remember- bunsen burner flame)
  
8. Name a star: Red Giant \_\_\_\_\_ Blue Giant \_\_\_\_\_  
Main sequence \_\_\_\_\_ White Dwarf \_\_\_\_\_
  
9. Where do stars form? \_\_\_\_\_

10. What is a Supernova? \_\_\_\_\_

11. Classify the Sun: TYPE= \_\_\_\_\_ Temp= \_\_\_\_\_  
Luminosity= \_\_\_\_\_

12. How many stars are in the Milky Way Galaxy, and most other galaxies? \_\_\_\_\_

13. What are Constellations? \_\_\_\_\_

13 a. Why is it unlikely for humans to visit other stars?

13 b. What is a light year? \_\_\_\_\_

14. How old is the Solar System? \_\_\_\_\_

14 a. Express the relationship:  
planets distance vs. orbital velocity

15. ESRT Solar System Data Chart- pick the right planet  
greatest density \_\_\_\_\_  
biggest (Mass & Diameter) \_\_\_\_\_  
most moons \_\_\_\_\_ shortest day \_\_\_\_\_  
longest year \_\_\_\_\_

16. Rate of Earth's Rotation = \_\_\_\_\_ (degrees /hour)  
use 24 hours/ day

17. Rate of Earth's Revolution = \_\_\_\_\_ (degrees /hour)

18. What is the Coriolis Effect? \_\_\_\_\_

19. What causes the tides of Earth's oceans? \_\_\_\_\_

20. Why do all celestial objects **rise in the east** and **set in the west**?

21. What causes Earth's seasons? \_\_\_\_\_?

22. What is an ellipse? \_\_\_\_\_ eccentricity? \_\_\_\_\_

ESRT  $E = d/L$   $d =$  \_\_\_\_\_  $L =$  \_\_\_\_\_ -

If  $E = 0$  (min.) shape = \_\_\_\_\_ If  $E = 1$  (max) shape = \_\_\_\_\_

Planets orbits are best described as \_\_\_\_\_

23. How much of the moon is illuminated by the sun? \_\_\_\_\_

24. What causes the phases of the moon? \_\_\_\_\_  
\_\_\_\_\_

25. Name the phase of the moon:

Solar Eclipse \_\_\_\_\_

Lunar Eclipse \_\_\_\_\_

26. Life in the Universe-

### **YOU DECIDE!!**

Are we the only life in the Universe?

How did life begin-here on Earth? Alien Origin? Creator?

You are a fast traveler! Add up our speed-

Earth's rotation appx. **1000 miles per hour** (at equator, 0 mph at NP)

Earth's revolution around the Sun appx  **$1.6 \times 10^6$  mph**

The Sun's revolution around the Milky Way Galaxy appx  **$940 \times 10^{12}$  mph**

**The Milky way galaxy traveling through space....**