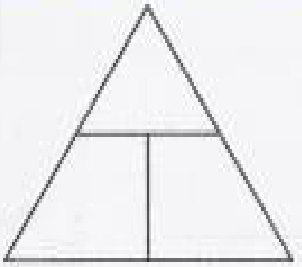
EARTH SCIENCE MIDTERM REVIEW

I. Fill in the Density Pyramid



QUESTIONS:

1. If the mass of a bowling ball is 33 and the volume is 5, what is the density? _____
2. If the density of Ms. Lenigan's coffee mug is 12 and the coffee's volume is 4, what is the mass? _____
3. If the mass of a rock is 140 and the density is 72, what is the volume? ____

B. STANDARD DEVIATION:

Write the equation for standard deviation:

1. Bullwinkle measured the school bus and determined the length to be 21 feet long. The actual length is 25 feet long. What is the percent deviation?

2. Buffy leaped onto a car that she measured 125 inches off the ground. The accepted helight of the car is 100 inches. What is the percent deviation?

C. RATE OF CHANGE:

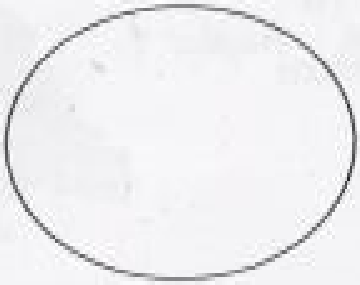
Write the equation for rate of change:

1. Vito's house is on a hill 100 feet high and Jill's house is at an elevation of 75 feet high. It took D.J. Tanner 5 minutes to run from Vito's to Jill's. What was the rate of change?

II. MEASURING EARTH:

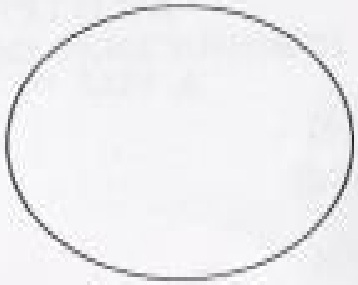
A. COORDINATE SYSTEMS:

Draw the **LATITUDE** lines
Label the equator

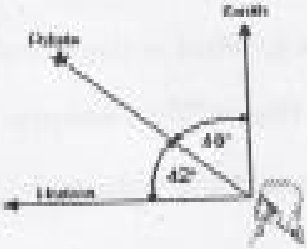


These lines run _____

Draw the **LONGITUDE** lines



These lines run _____



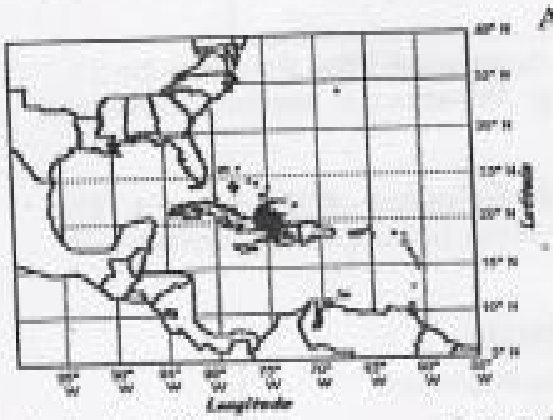
YOUR **LATITUDE** IS EQUAL TO **POLARIS'**

_____

So if your latitude is **59 degrees North**, than Polaris' _____ is _____.

Solar time lets you know the _____ line

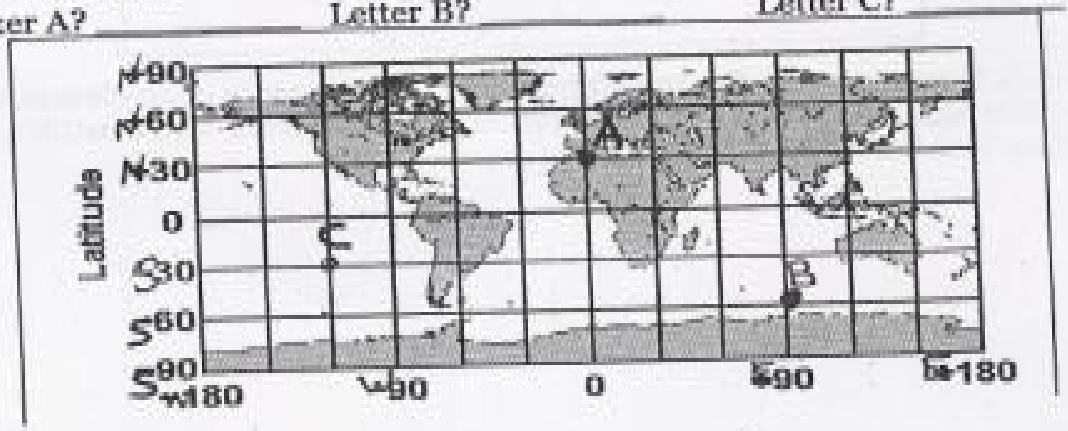
I. What are the **coordinates** for...



A. THE HURRICANE? _____

🌀 = Hurricane symbol

B. Letter A? _____ Letter B? _____ Letter C? _____



B. MAPPING.

A. GRADIENT

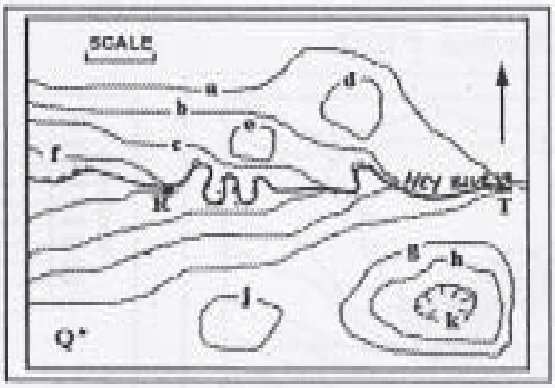
Write the equation for gradient:

Questions 1:
The lifeguard chair is at an elevation of 10 feet and the above ground pool is 3 feet. If the pool is 2 km away from the chair, what is the gradient? _____

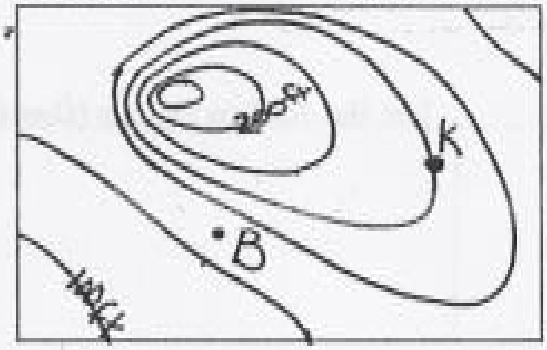
1. A **high** gradient means that the **slope is** _____
2. A **low** gradient means that the **slope** is _____
3. REVIEW OF ISOLINES:
   a. **Contour Lines** measure _____
   b. **Isotherms** measure _____
   c. **Isobars** measure _____
4. If isolines are **CLOSE**, then the gradient is _____.
5. If the isolines are **SPREAD** out, then the gradient is _____.
6. A profile is the _____ view of an area.
7. Rivers always flow from _____ to _____ elevation.
8. Rivers always flow the _____ of the contour line's _____.

PRACTICE READING AND DRAWING MAPS:

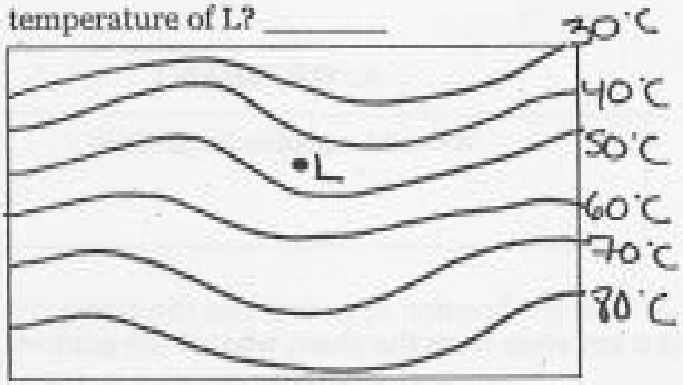
1. What direction is the river flowing? _____



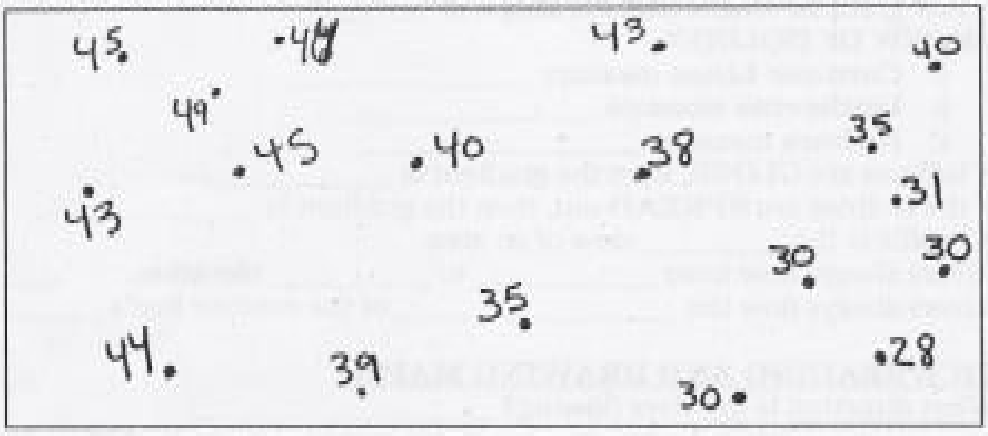
2. What is K's elevation? _____ What is B's elevation? _____



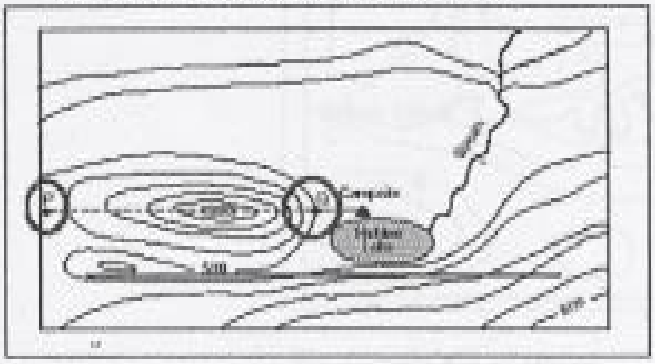
3. What is the temperature of L? _____

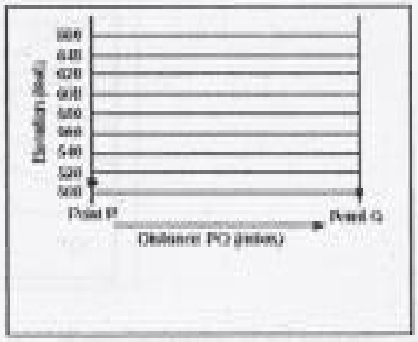


4. Draw isolines for 30 ft, 35 ft, 40 ft, and 45 ft intervals. Label each isoline.



5. Draw the profile from P to Q.





III. SOLAR SYSTEM:

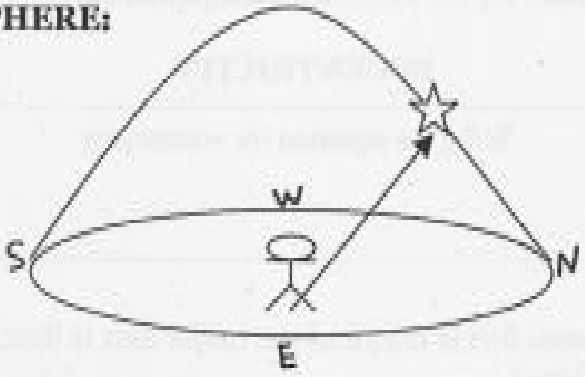
A. Planets/Stars

1. List **terrestrial** planets

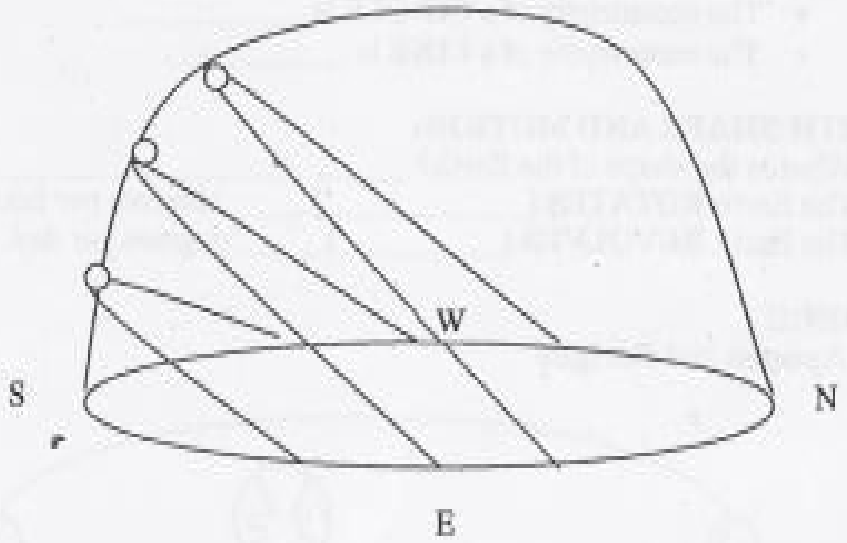
List the **Jovian** planets **(Gas Giants)**

2. Using the Solar System Chart, which planet has:
   a. the biggest period of revolution? _____
   b. smallest eccentricity? _____
   c. largest number of moons? _____
   d. longer day then year? _____
3. Using the H&R Diagram Chart, answer...
   a. name a Red Giant: _____
   b. our Sun is a _____
   c. 90% of the stars are part of _____
   d. What's hotter, Red Dwarf or White Dwarf? _____
   e. As you move to the right, the temperature of the stars _____ on the chart.
4. Doppler Effect:
   a. Which shift means objects move closer? _____
   b. Which shift means objects move away? _____
   c. Which shift has a longer wave length? _____

B. **CELESTIAL SPHERE:**
Label the **Zenith**



Label the **SEASONS & the DATES:**

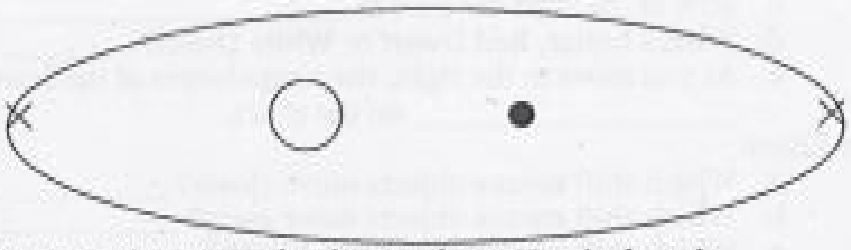


1. If the Syn is in the SW, your shadow is in the _____
2. The lower the angle of the Sun, the _____ your shadow.

C. SOLAR SYSTEM MODELS

1. **Geocentric Model** has _____ at the center
2. **Heliocentric Model** has _____ at the center
3. The closer a planet is to a star, the _____ it revolves around the star. This is because of _____

LABEL: **Foci, Major Axis, Orbit, perihelion, and aphelion.**



At **perihelion,** the season for the Northern Hemisphere is _____
At **aphelion,** the season for the Northern Hemisphere is _____

ECCENTRICITY

Write the equation for eccentricity:

Question 1:
If the difference between foci is 2cm and the major axis is 8cm, what is the eccentricity of the ellipse? _____

- The eccentricity of a **CIRCLE** is _____
- The eccentricity of a **LINE** is _____

D. EARTH SHAPE AND MOTION:

1. What is the shape of the Earth? _____
2. The Earth **ROTATES** (_____) _____ degrees per hour.
3. The Earth **REVOLVES** (_____) _____ degrees per day.

E. MOON!!!

Label: **Apogee** and **Perigee**

The Moon takes approximately _____ days or _____ weeks to orbit the Earth.