Name _____
Period _____ Date _____

Unit 7 Topographic Maps
Earth Science

I. Time and Longitude

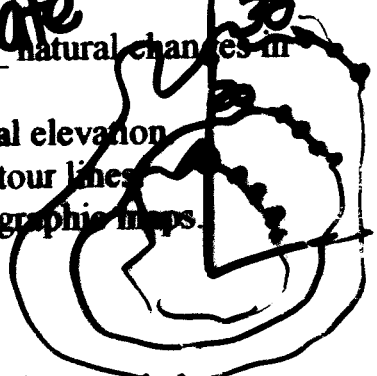
a. Humans divided the Earth into 24 time zones.
b. [redacted] longitude are the basis for time zones.
c. If you move one time zone to the EAST, the time will be 1 hour later
d. If you move one time zone to the WEST, the time will be 1 hour earlier.
e. Why did humans put time zones on Earth?
Railroads made travel quicker- needed common system

II. Drawing Maps of the Earth

a. Humans can map just about anything.
b. A field is a region of space in which a similar quantity can be measured at every point or location.
c. Field values can change with the passage of time.
d. isolines - are lines that connect points of equal value.
   i. isotherms - are lines that connect points of equal temperature.
   ii. isobars - are lines that connect points of equal pressure.
   iii. contour lines are lines that connect points of equal elevation.

III. Topographic Maps

a. Topographic maps are also called Contour maps.
b. They are two dimensional models that use contour lines to represent places of equal elevation.
c. Technology has both created changes and accelerate natural changes in the landscape.
d. Contour lines - lines that connect points of equal elevation.
e. Contour Interval - the distance between contour lines.
f. *** You HAVE to know how to read, interpret and draw topographic maps.

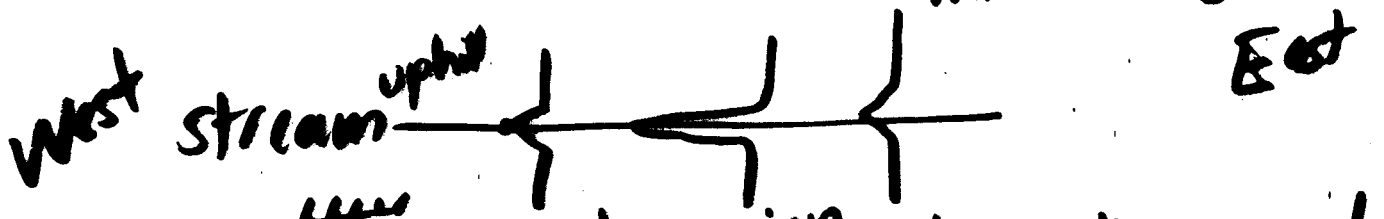


IV. Topographic Map Rules

a. All points on a contour line have the same elevation.
b. Every fifth line is called an index line. It is usually darker and helps you count elevations.
c. All contour lines are [redacted]ed (make a circle), but they might not look like they are closed because the map might be too small.
d. Two contour lines of different elevations may not touch each other.
   i. Exceptions: cliff and waterfall
e. The spacing of the contour lines indicates the nature of the slope.
   i. Close together - steep
   ii. Farther apart - gentle
   iii. No lines - flat

f. Where contour lines cross a stream, they always form a V. The V's point upstream (uphill), against the water flow.

Water flowing East

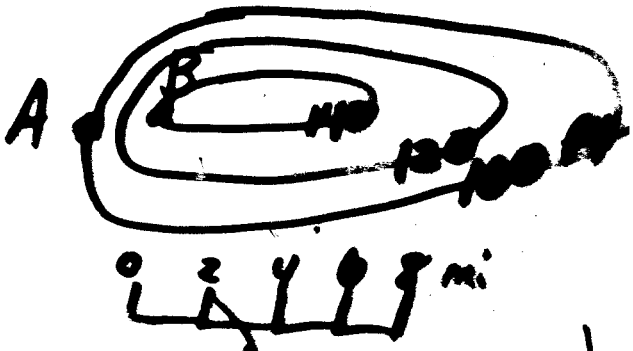


g. Hachure marks indicate a depression hole in the ground

Mr. Wyler's special Rule: 1st one is a "do over."

h. Gradient

i. It is possible to calculate the gradient of a slope using the formula on page 1 of your reference table.



Gradient = $\frac{\text{change in field value}}{\text{distance}}$

(−) = $\frac{140\text{ ft} - 100\text{ ft}}{2\text{ miles}}$ (← Elevation of B − elevation A) (← edge of paper, compared to scale.)

(÷) = $\frac{40\text{ ft.}}{2\text{ miles}}$

= $\frac{20\text{ ft/miles}}{}$

mi = miles
m = meters
ml = milliliters