NAME: _____ DATE: _____

#6

TOPOGRAPHIC MAPS

OBJECTIVE: The student will be able to read a topographic map.

MATERIALS: Topographic map, calculator, ruler, string, graph paper.

QUESTIONS: MUST USE A MAP IN CLASS - See Me.

1. What is the name of the map you are using?

2. What is the map scale? How many feet on the ground does one inch on the map represent?

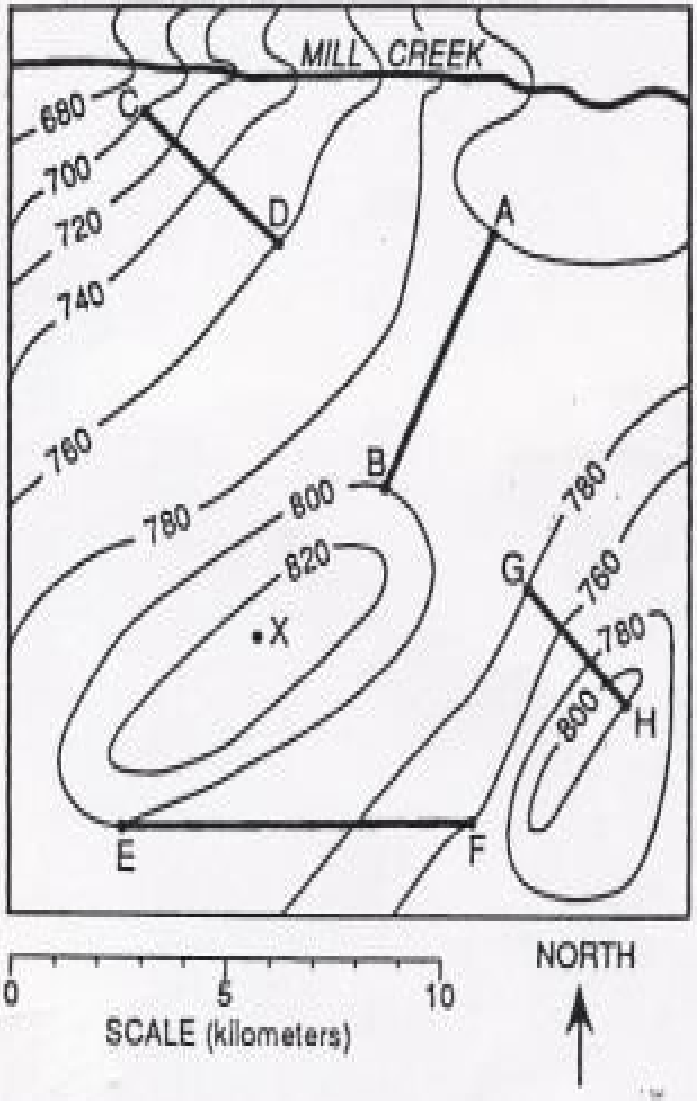
3. What is the contour interval? What is the interval between index lines?

4. Find "Orphanage". What is its elevation? Give the coordinates of its summit in latitude and longitude to the nearest minute.

5. Find Williams Brook. Which direction (upstream or downstream) do the "V's" in the contour lines point?

6. Locate Catskill Turnpike. Calculate the average slope from the summit to the benchmark.

Base your answers to questions 8 to 11 on the topographic map below, your knowledge of Earth Science and on the *Earth Science Reference Tables*. The topographic map represents elevation in contour measured in meters.



8. State the highest possible elevation of **X**. _____

9. State the direction in which Mill Creek is flowing. _____

10. Explain how the contour lines show the direction of stream flow.

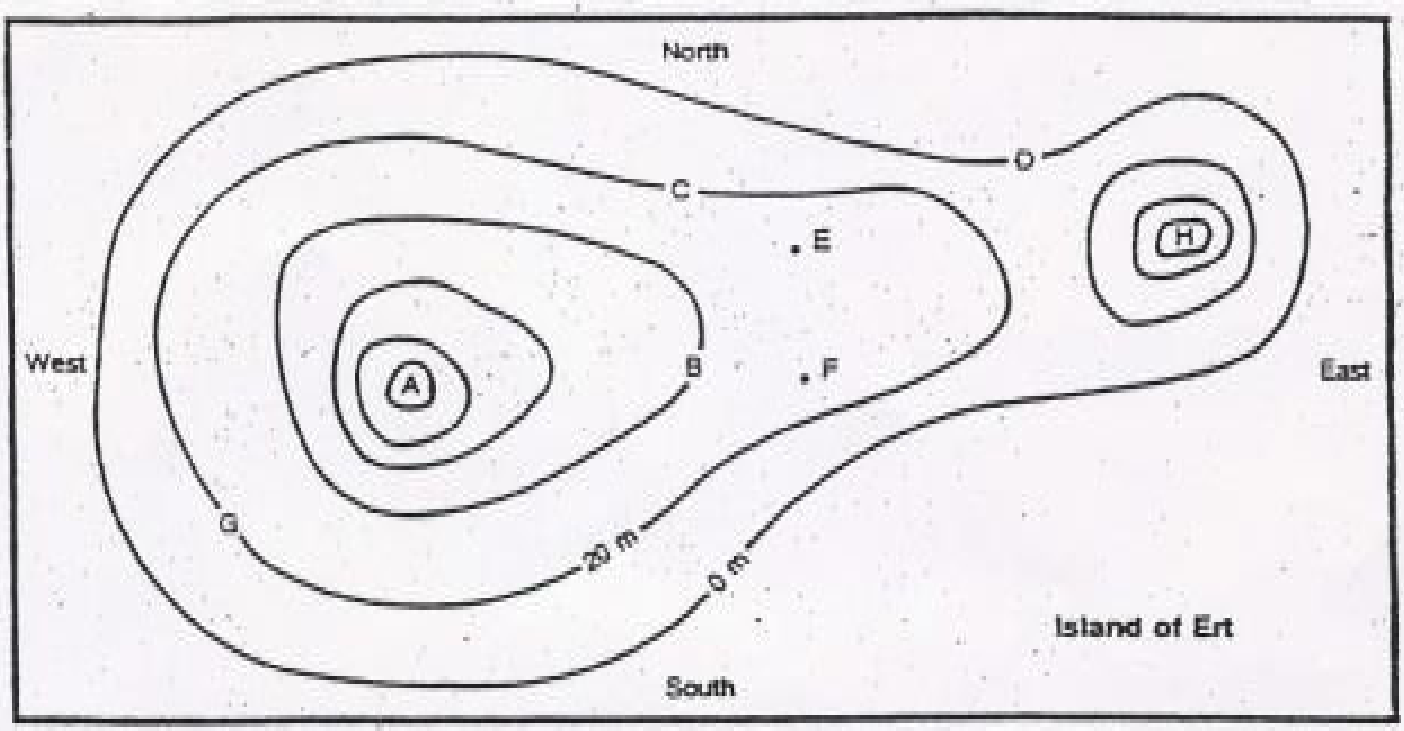
_____

11. Compare the lines drawn from C-D, G-H, E-F. What is the gradient of C-D?

_____

Critical Thinking and Application

When answering the following questions, refer to the accompanying map of the island of Ert



1. What is the contour interval of the map of the island of Ert?

_____

2. Label the height of each contour line on the map of the island.

3. What two points on the map have the same elevation?

_____

4. What is the approximate elevation of point H?

_____

5. How many mountains or hills are there on the island of Ert?

_____

6. Determine the approximate elevation of the highest point on the island.

_____

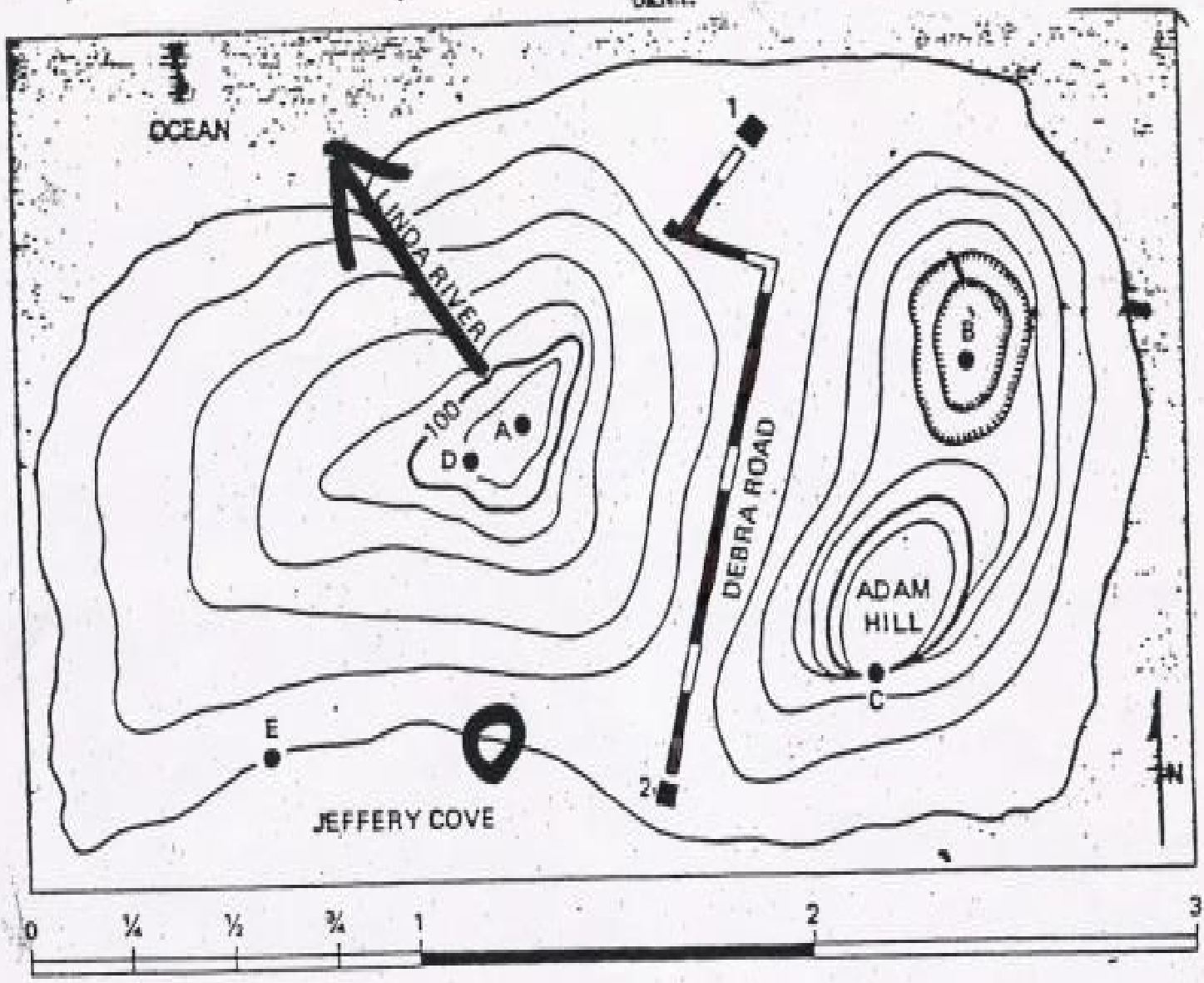
7. If you were to walk along the 20-meter contour line from point C to point G, would your elevation increase, decrease, or remain the same?

_____

Map Interpretation

Part II

five questions. Choose seven of these ten groups. Be sure the
answers to these questions on the separate ans
oklet.

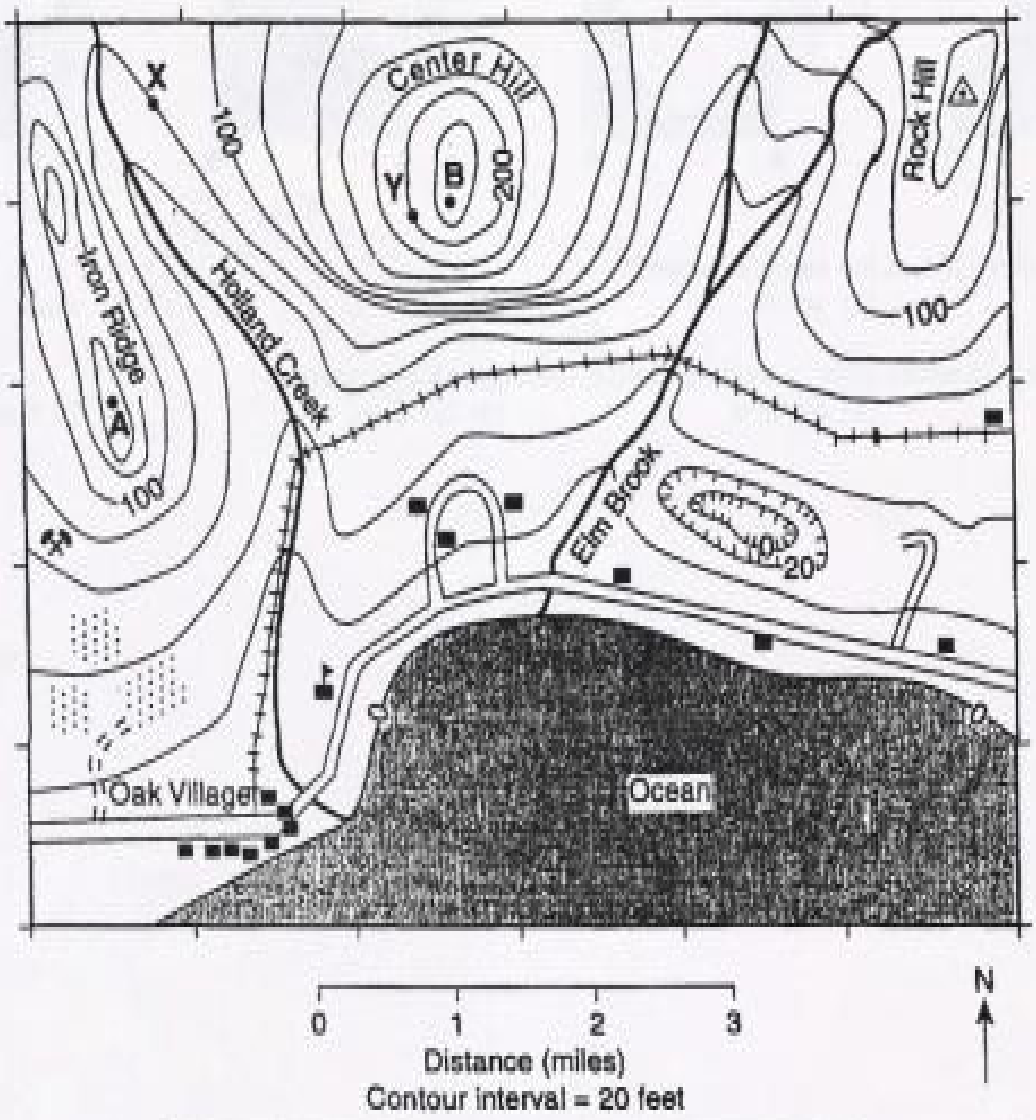


1. What is the contour interval represented by this map? _____
2. What is the greatest possible elevation of Adam Hill? _____
3. In what direction is Linda River flowing? _____
4. What is the lowest possible elevation of Point *B*? _____
5. What is the elevation of the rim of the depression at *B*? _____
6. What is the distance along Debra Road from House 1 to House 2 to the nearest quarter mile?

_____

7. What is the greatest possible elevation of Point *A*? _____
8. What does the Symbol *A* represent? _____
9. What does the symbol at Point *C* represent? _____

Base your answers to questions 1 through 5 on your knowledge of Earth science. Points *A*, *B*, *X*, and *Y* are locations on the map. Elevations are shown in feet.



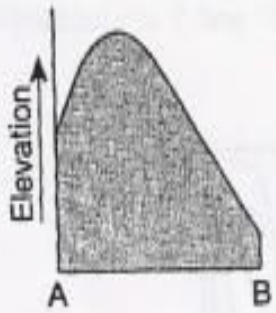
1. In which general direction is Elm Brook flowing?
   (1) southwest (2) southeast (3) northwest (4) northeast

2. What is the approximate elevation of the triangulation point on the top of Rock Hill?
   (1) 124 ft (2) 139 ft (3) 144 ft (4) 169 ft

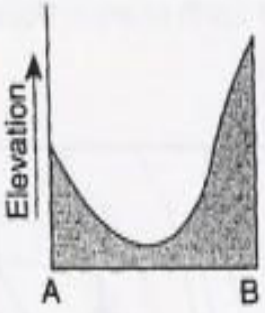
ISOLINE PRACTICE

3. Which diagram best represents the topographic profile along a straight line from point *A* to point *B*?

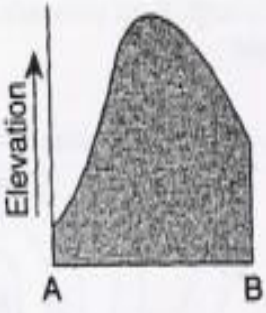
(1)



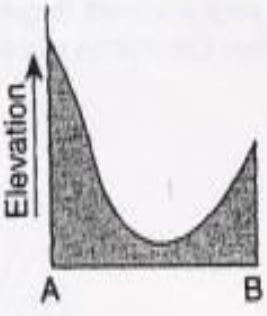
(2)



(3)



(4)



4. Which side of Center Hill has the steepest slope?

(1) north (2) south (3) east (4) west

5. What is the average gradient along a straight line between point *X* and point *Y*?

(1) 30 ft/mi (2) 40 ft/mi (3) 60 ft/mi (4) 70 ft/mi