

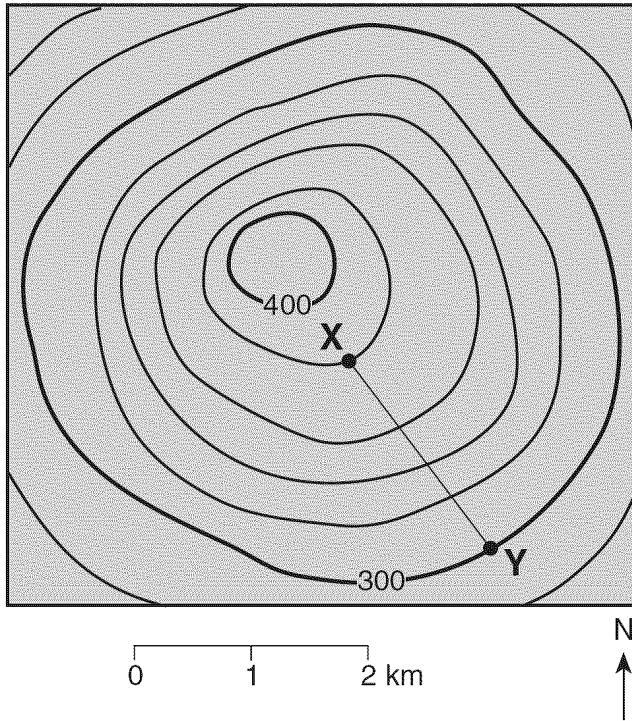
1. Base your answer to the following question on the isoline map below, which shows the average yearly precipitation, in inches, across New York State.



Approximately how many inches of average yearly precipitation does Rochester, New York, receive?

- A) 26 B) 30 C) 38 D) 42

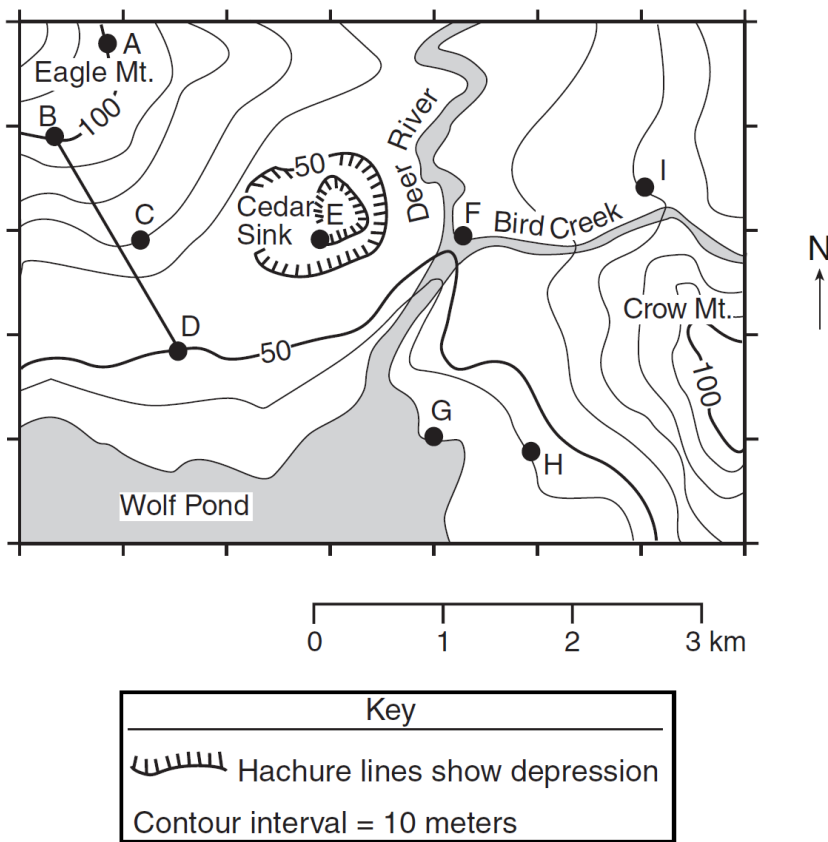
2. Base your answer to the following question on The topographic map below shows a hill. Points X and Y represent locations on the hill's surface. Elevations are shown in meters.



What is the gradient between points X and Y ?

- A) 40 m/km B) 80 m/km
C) 100 m/km D) 120 m/km

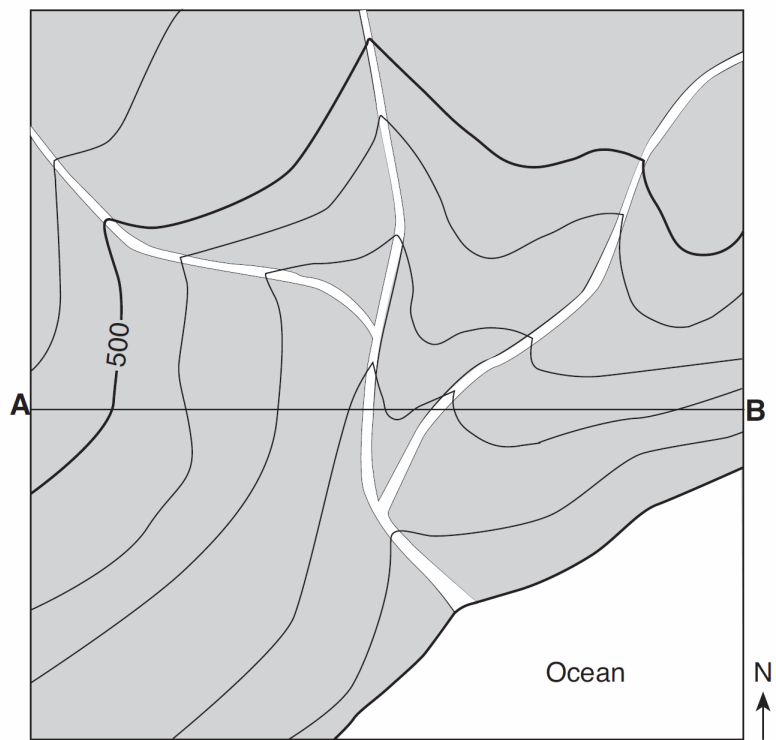
3. Base your answer to the following question on the topographic map below. Points *A* through *I* are locations on the map. Elevations are shown in meters.



Which locations have the same elevation?

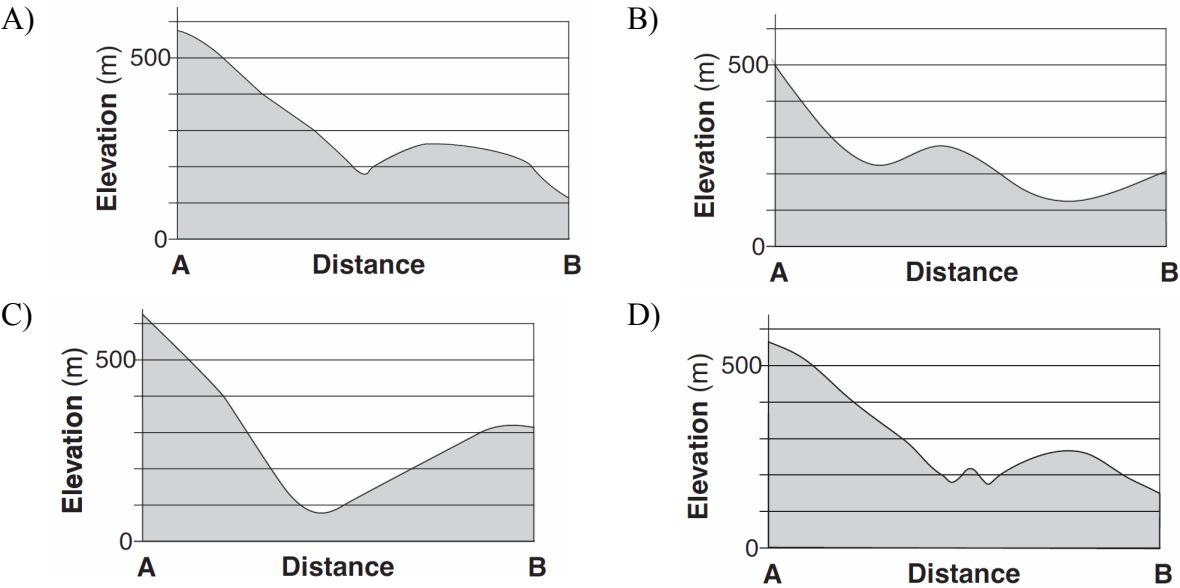
- A) *A* and *C* B) *B* and *E* C) *C* and *I* D) *F* and *G*

4. Base your answer to the following question on The contour map below shows elevations recorded in meters. Line *AB* is a reference line on the map.

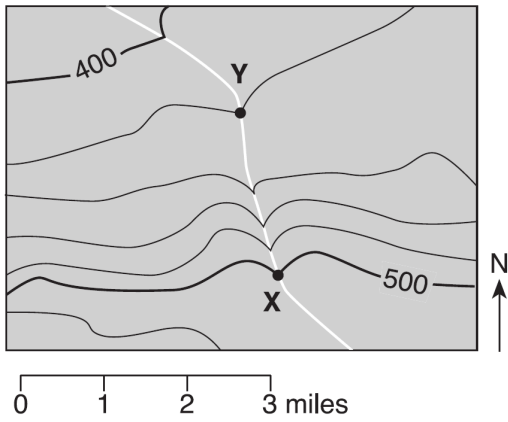


Contour interval = 100 m

Which graph best represents the profile from point *A* to point *B*?

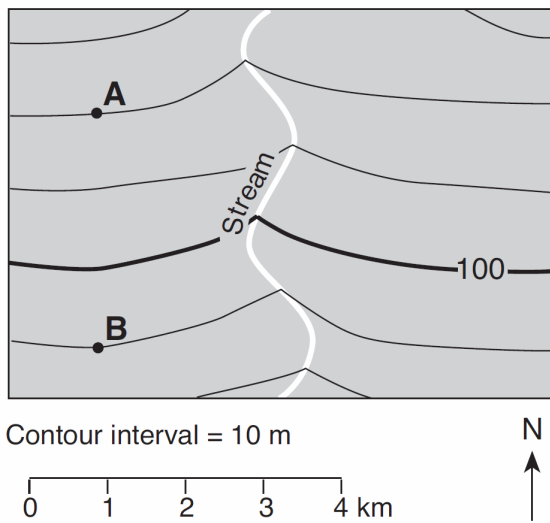


5. Base your answer to the following question on The topographic map below shows a stream crossing several contour lines and passing through points *X* and *Y*. Elevations are measured in feet.



What is the approximate gradient between point *X* and point *Y*?

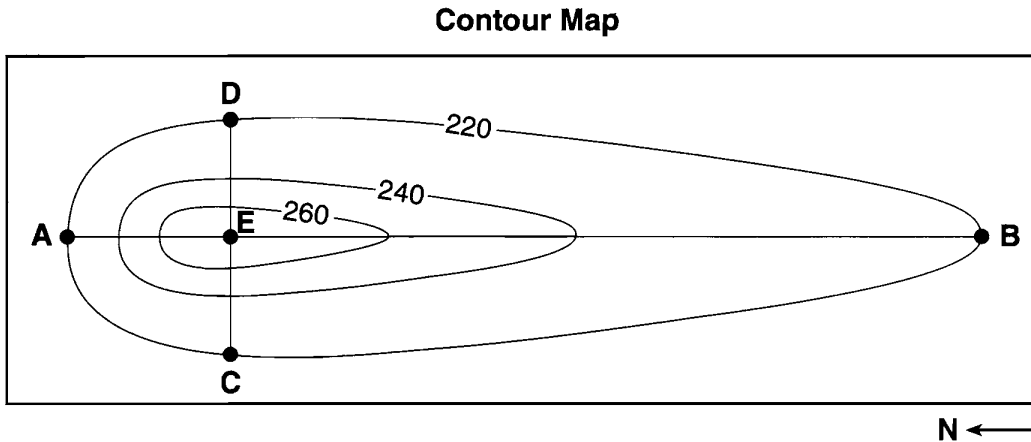
- A) 10 ft/mi B) 20 ft/mi
C) 40 ft/mi D) 80 ft/mi
6. Base your answer to the following question on The topographic map below shows the location of a stream. Points *A* and *B* are locations on Earth's surface.



What is the gradient between points *A* and *B*?

- A) 1 m/km B) 2 m/km
C) 10 m/km D) 20 m/km

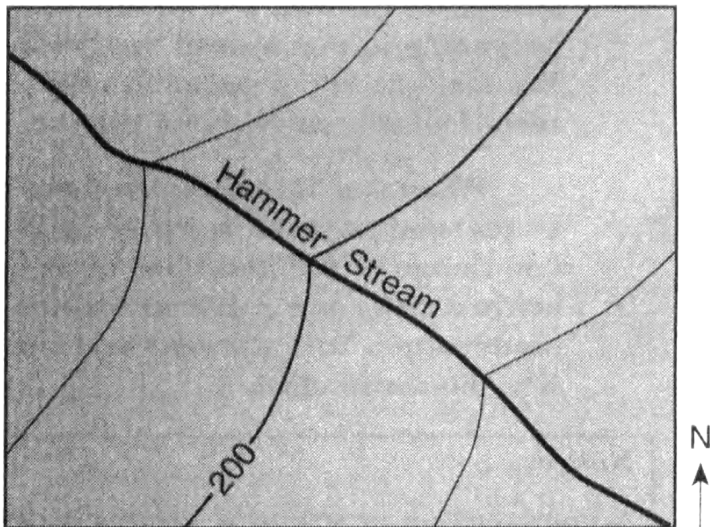
7. Base your answer to the following question on the contour map below, which shows a hill formed by glacial deposition near Rochester, New York. Letters *A* through *E* are reference points. Elevations are in feet.



Which description best compares the gradients of this hill?

- A) *AE* and *EB* have the same gradient. B) *AE* has a steeper gradient than *EB*.
 C) *CE* has a steeper gradient than *ED*. D) *CE* and *AE* have the same gradient.

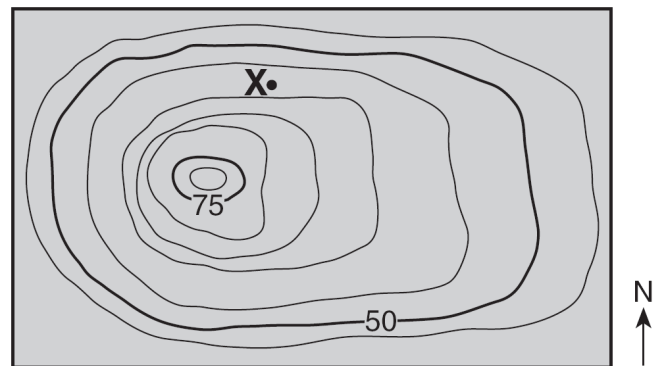
8. Base your answer to the following question on The topographic map below shows part of a stream.



In which general direction is the stream flowing?

- A) northeast B) northwest
 C) southeast D) southwest

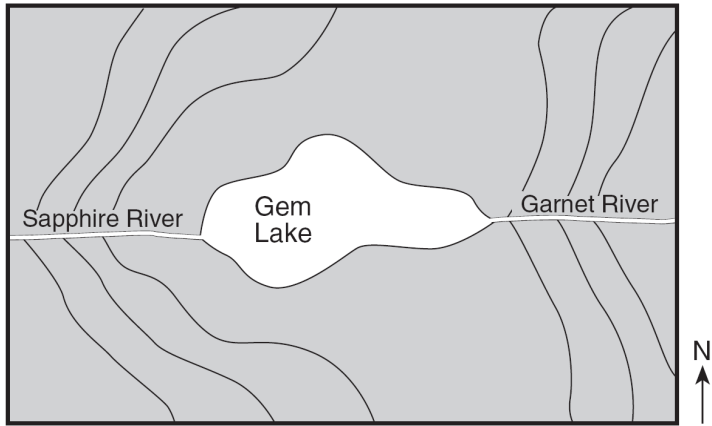
9. Base your answer to the following question on Point *X* is a location on the topographic map below. Elevations are measured in meters.



What is a possible elevation, in meters, of point *X*?

- A) 55 B) 57 C) 68 D) 70

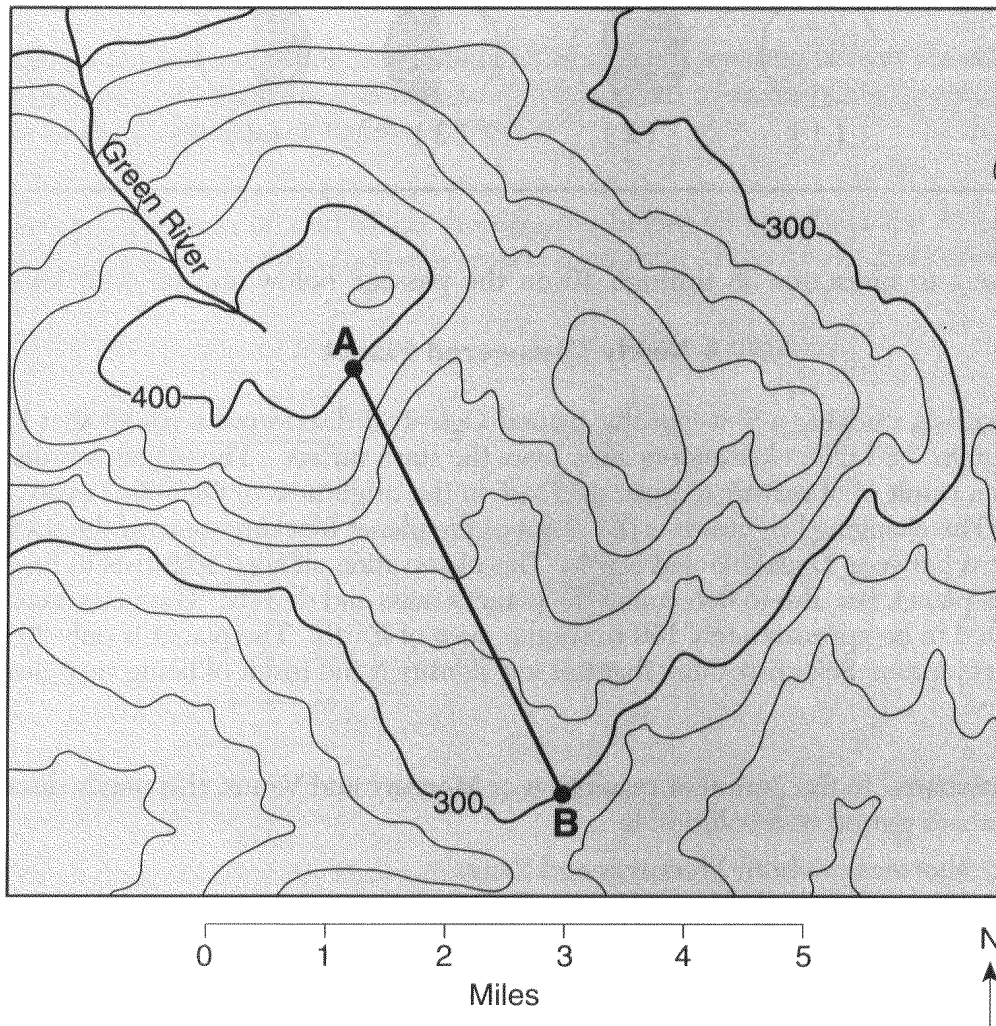
10. The topographic map below shows a lake and two rivers.



In which direction does each of the rivers flow?

- A) The Sapphire River and the Garnet River both flow east.
- B) The Sapphire River and the Garnet River both flow west.
- C) The Sapphire River flows east and the Garnet River flows west.
- D) The Sapphire River flows west and the Garnet River flows east.

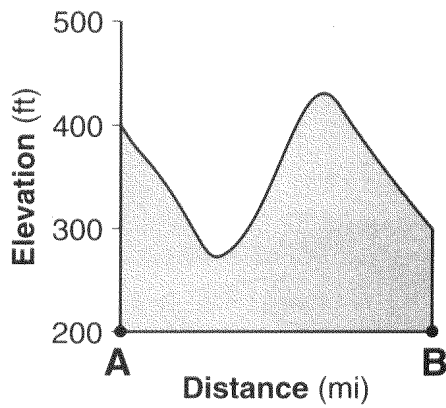
Base your answers to questions **11** through **13** on the topographic map below. Elevations are in feet. Point A and B are locations on the map.



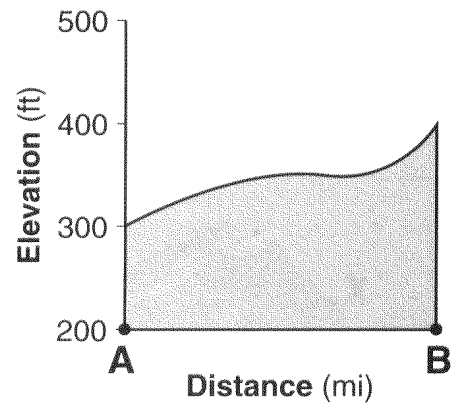
11. What evidence can be used to determine that the land surface in the northeast corner of the map is relatively flat?
- A) a rapidly flowing river
 - B) a large region covered by water
 - C) the dark contour line labeled 300
 - D) the absence of many contour lines

12. Which graph best represents the profile along line AB ?

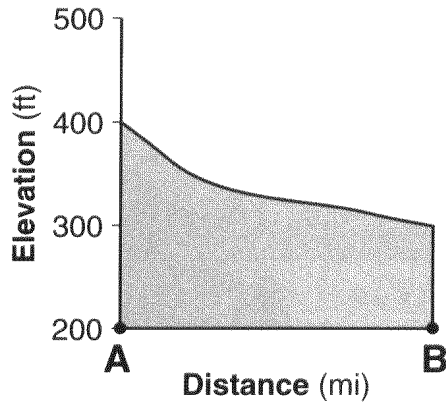
A)



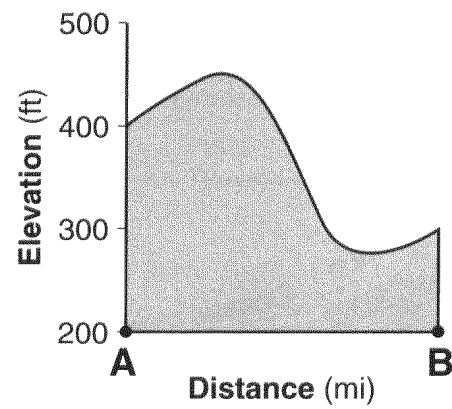
B)



C)



D)



13. Toward which direction does the Green River flow?

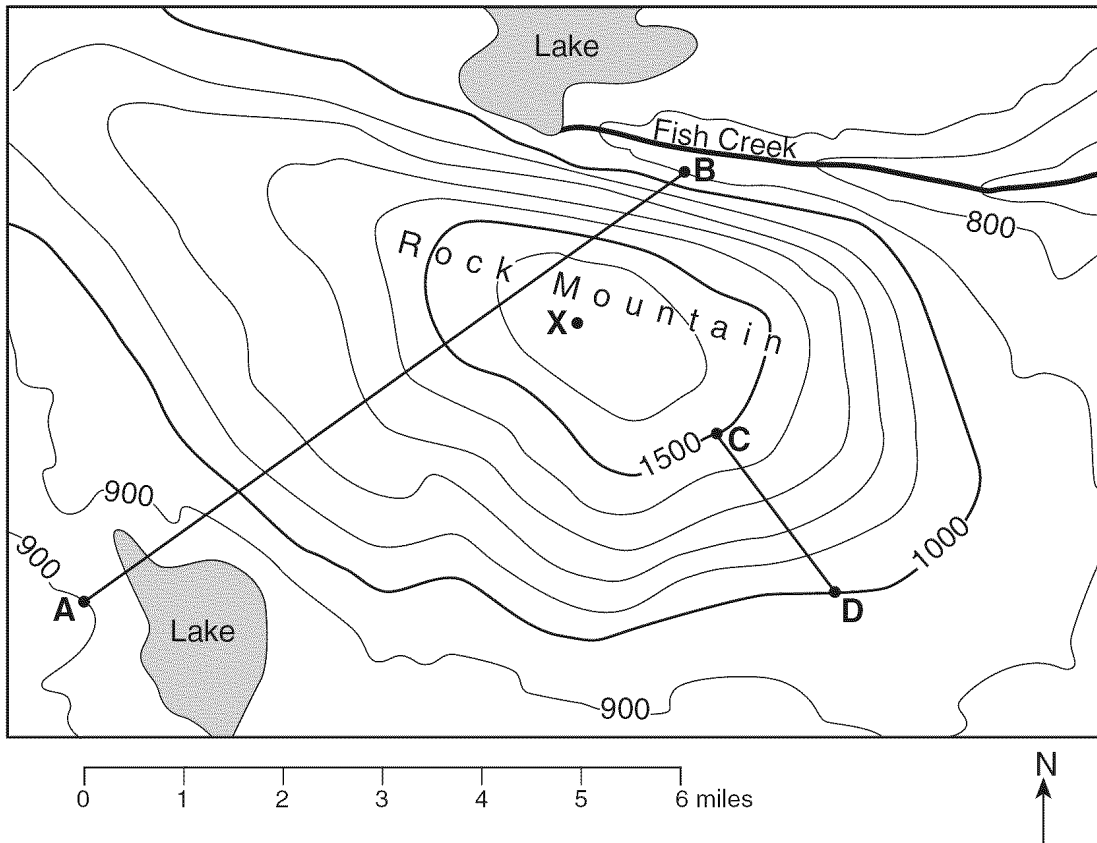
A) northeast

B) northwest

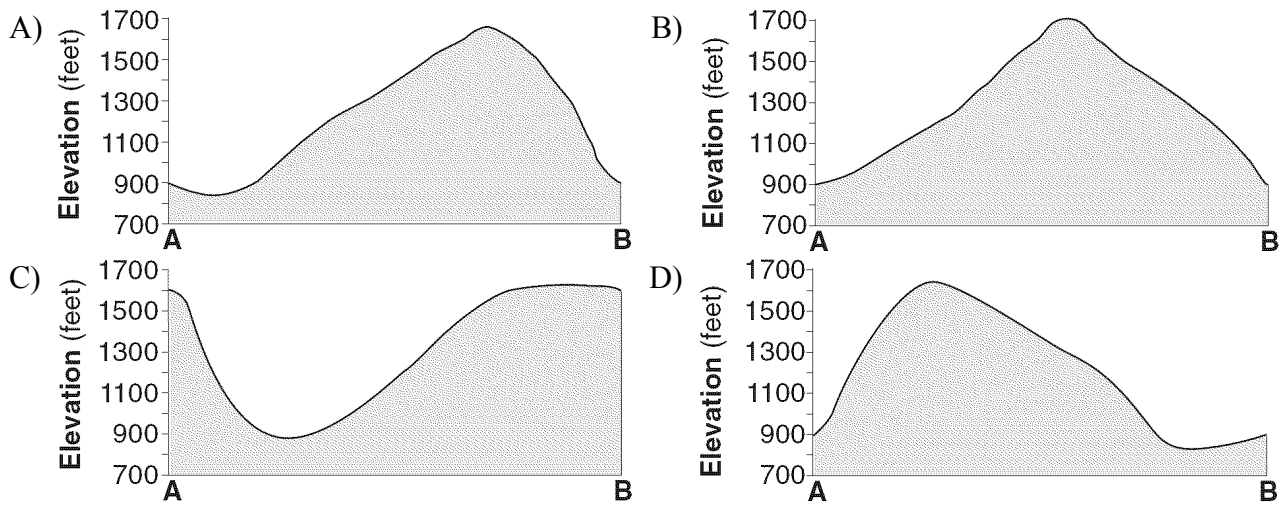
C) southeast

D) southwest

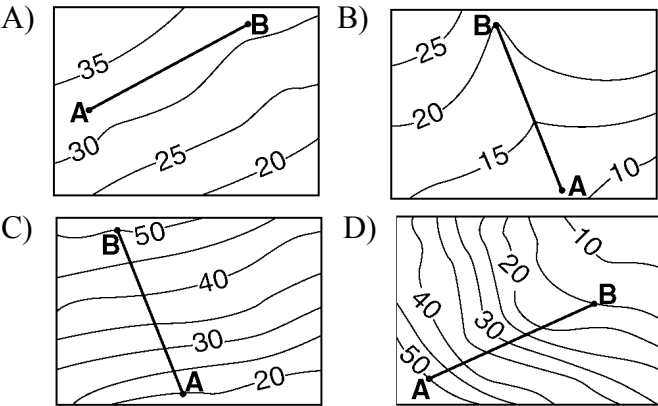
14. Base your answer to the following question on the topographic map below. Points *A*, *B*, *C*, *D*, and *X* represent locations on the map. Elevations are measured in feet.



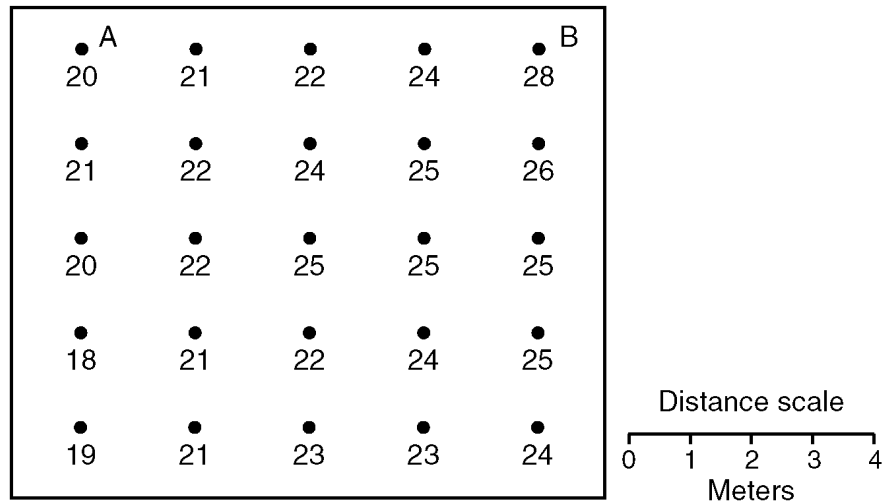
Which cross section best represents the profile along straight line *AB*?



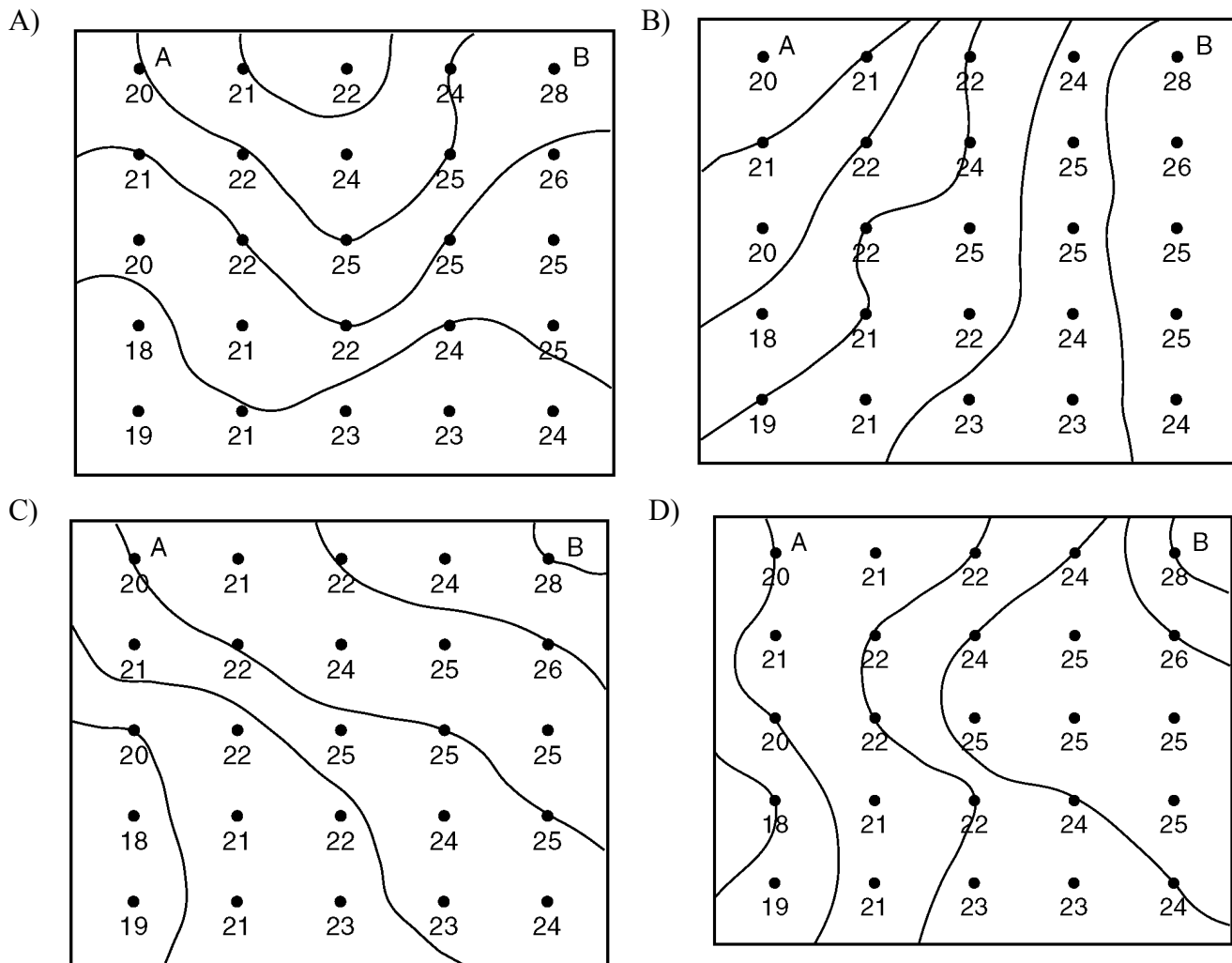
15. On each topographic map below, the straight-line distance from point *A* to point *B* is 5 kilometers. Which topographic map shows the steepest gradient between *A* and *B*?



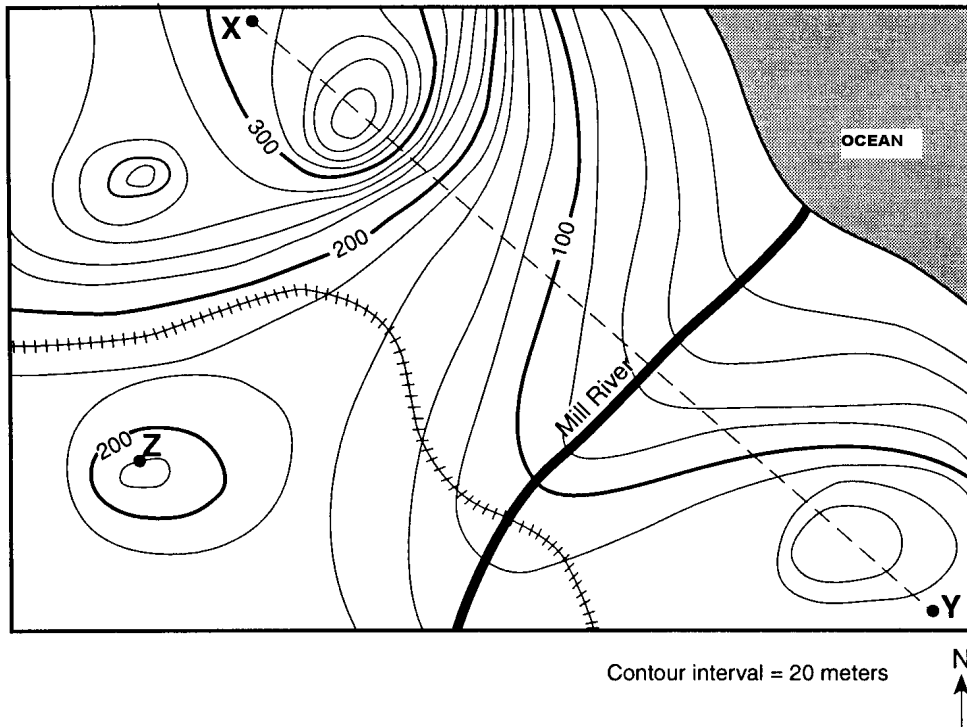
16. The field map below shows air temperature measurements, in degrees Celsius, taken at the same elevation within a closed room. Two reference points, *A* and *B*, are shown.



Which temperature field map shows correctly drawn isotherms?



Base your answers to questions 17 through 19 on the topographic map below. Points X, Y, and Z are locations on the map. Elevations are expressed in meters.



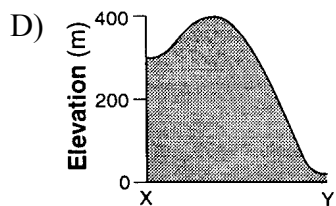
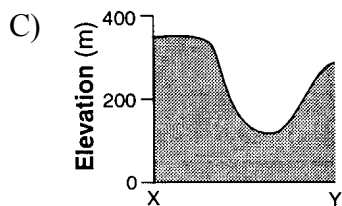
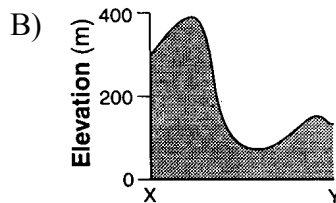
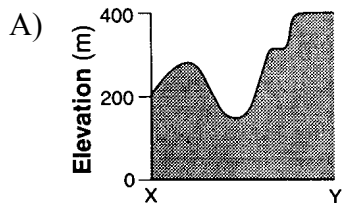
17. Mill River generally flows toward the

- A) southeast B) southwest C) northeast D) northwest

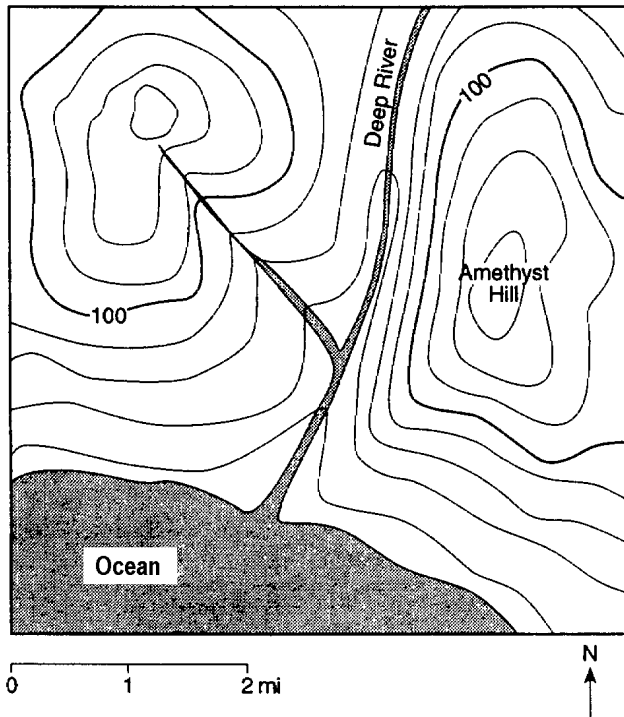
18. What is the elevation of point Z?

- A) 190 m B) 220 m C) 240 m D) 250 m

19. Which profile best represents the topography along the dashed line from point X to point Y?



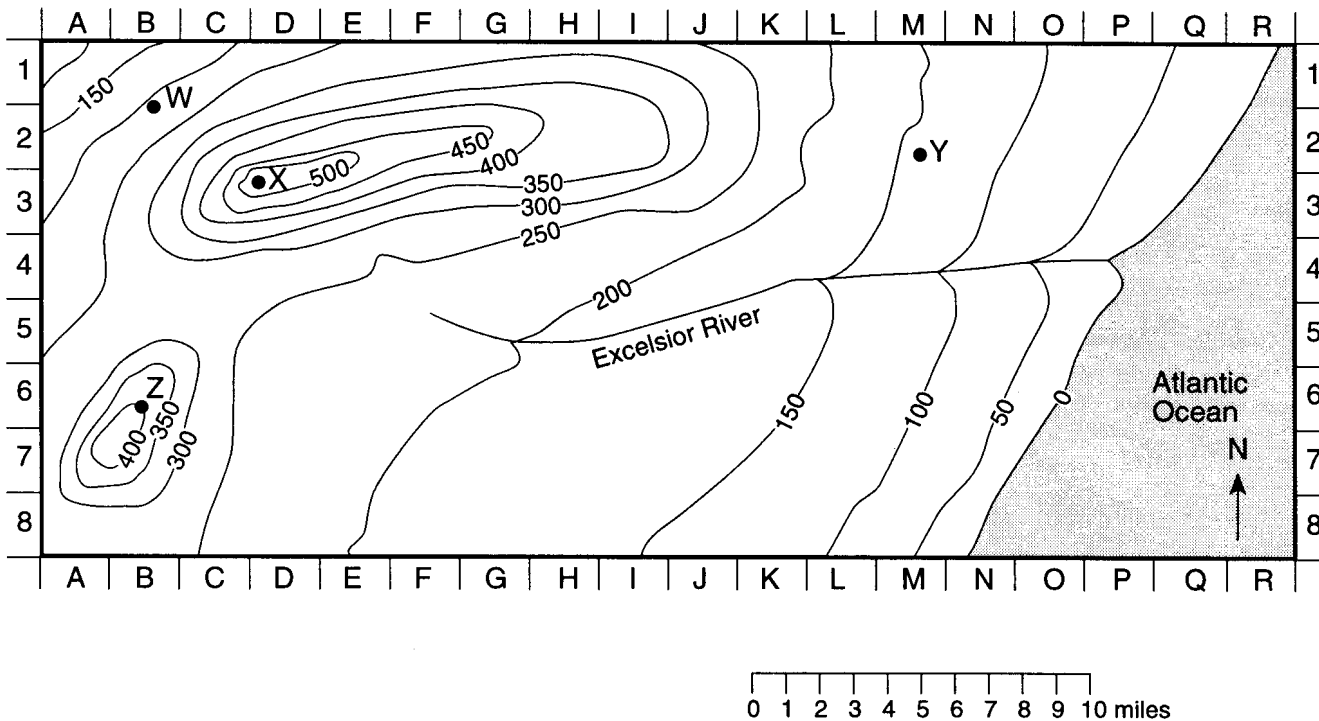
20. Base your answer to the following question on A contour map is shown below. Elevations are shown in feet.



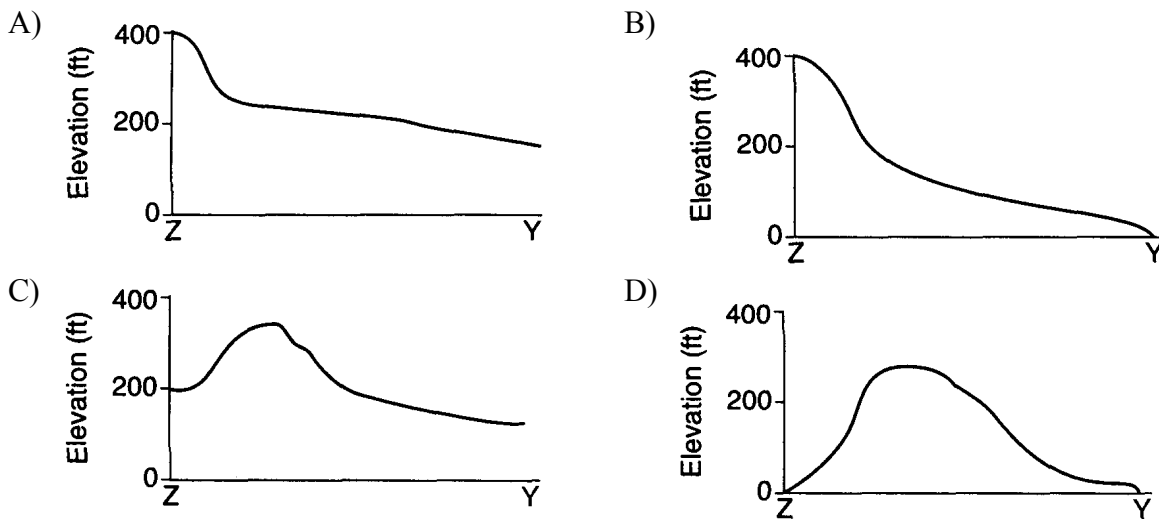
What is the contour interval of this map?

- A) 10 ft B) 15 ft C) 20 ft D) 25 ft

Base your answers to questions 21 through 24 on the topographic map below that represents a location in North America. A grid system of letters and numbers along the edges of the map is provided to assist in finding locations. Elevations are expressed in feet.



21. Which profile best represents the topography along a straight line from point **Z** (6-B) to point **Y** (2-M)?



22. What is a possible elevation at point **X** (grid location **3-D**)?

- A) 488 ft B) 548 ft C) 558 ft D) 598 ft

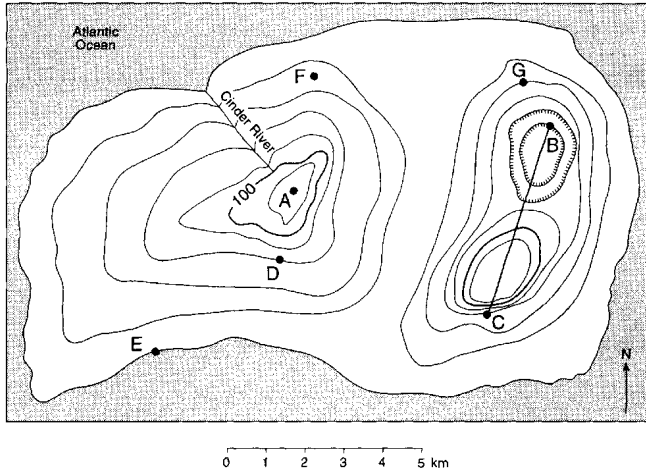
23. If a person at point **W** (grid location **2-B**) travels uphill, in which direction is the person traveling?

- A) northwest B) northeast C) southwest D) southeast

24. What is the approximate elevation at grid location **7-I**?

- A) 140 ft B) 170 ft C) 200 ft D) 230 ft

25. Base your answer to the following question on the contour map of an island below. Points *A* through *G* represent locations on the island. Elevations are in meters.



In which direction does the Cinder River flow?

- A) southeast B) southwest C) northeast D) northwest