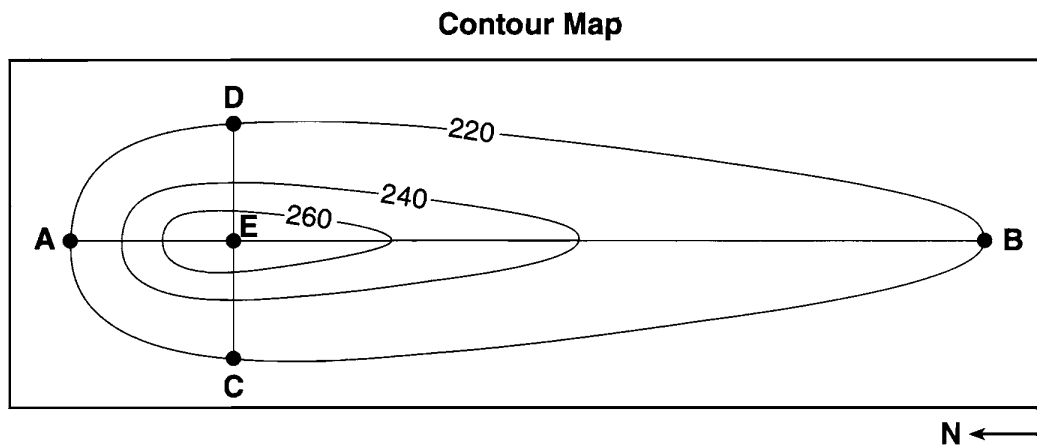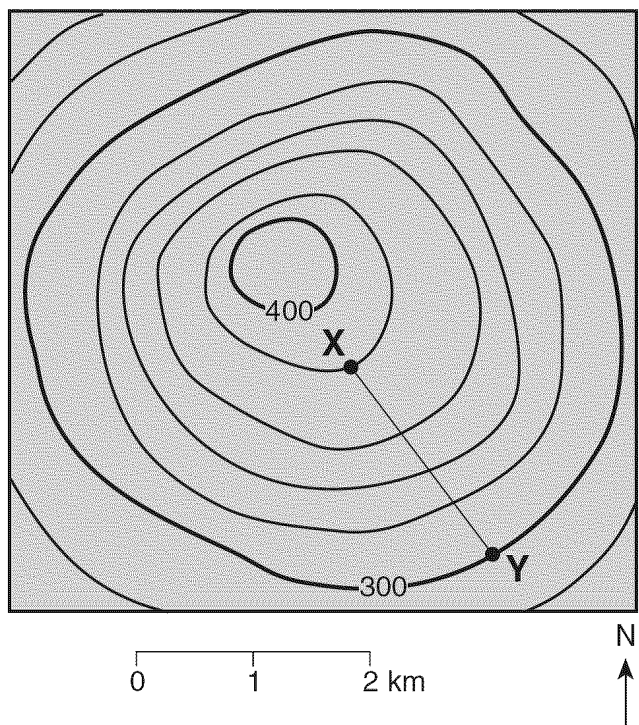1. Base your answer to the following question on the contour map below, which shows a hill formed by glacial deposition near Rochester, New York. Letters *A* through *E* are reference points. Elevations are in feet.

Contour Map

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*.
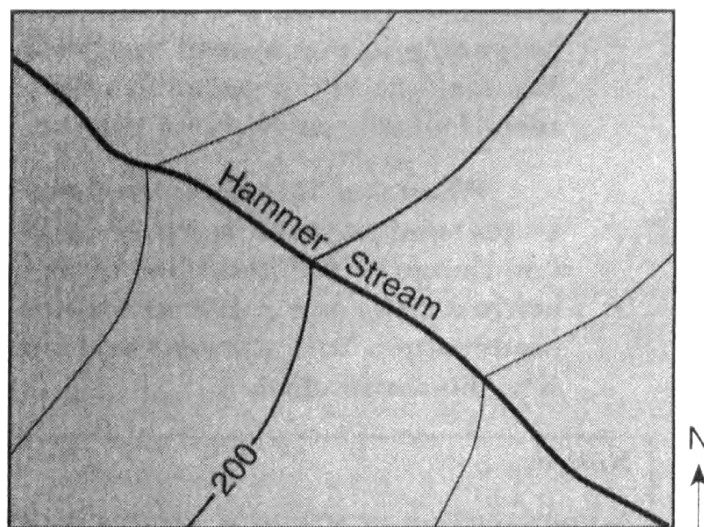D) *CE* and *AE* have the same gradient.

2. 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*?
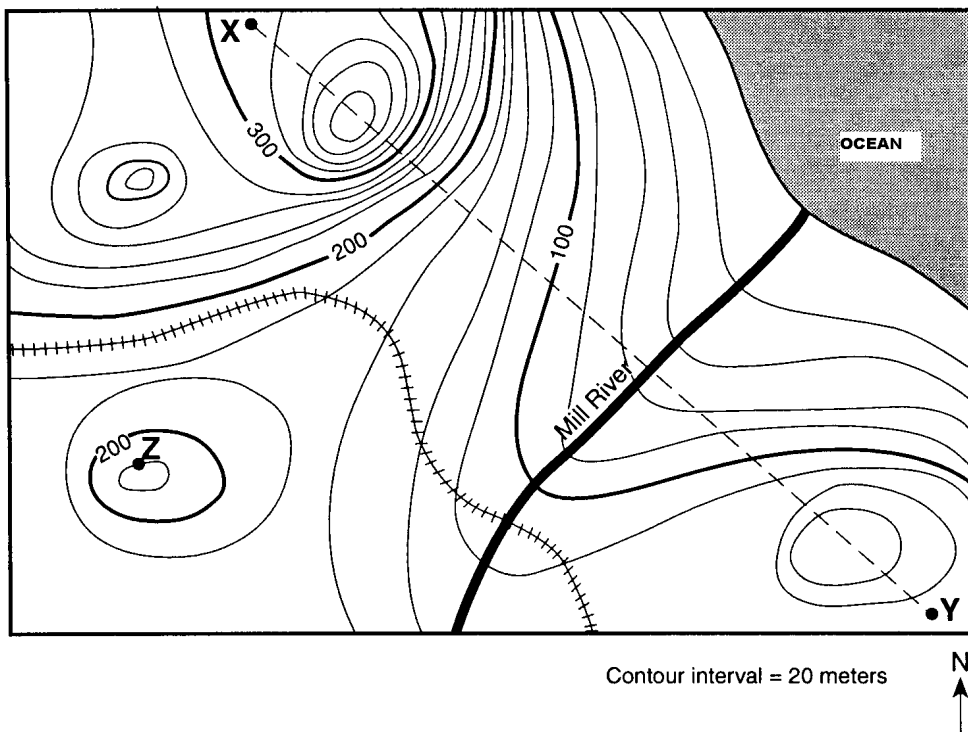
A) 40 m/km
B) 80 m/km
C) 100 m/km
D) 120 m/km

3. The topographic map below shows part of a stream.
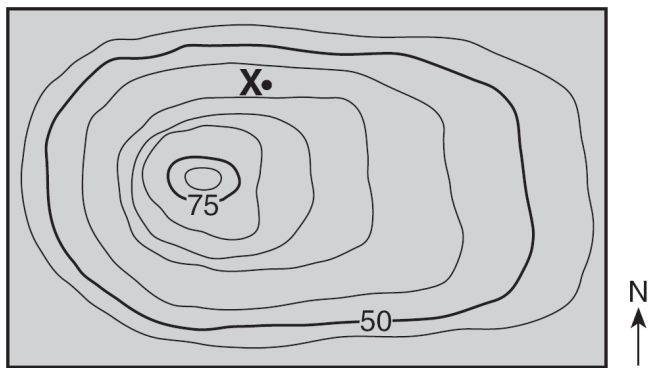

In which general direction is the stream flowing?

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

Base your answers to questions **4** and **5** on the topographic map below. Points *X, Y*, and *Z* are locations on the map. Elevations are expressed in meters.

Contour interval = 20 meters

N

4. Mill River generally flows toward the

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

5. What is the elevation of point *Z*?
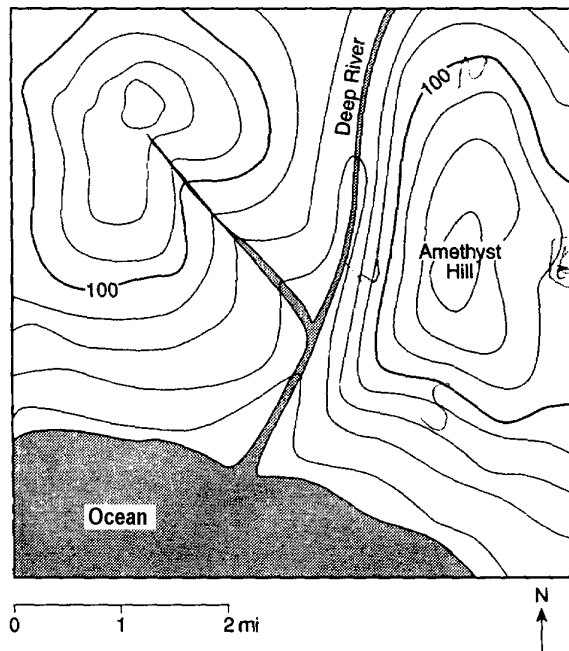
   A) 190 m   B) 220 m   C) 240 m   D) 250 m

6. 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

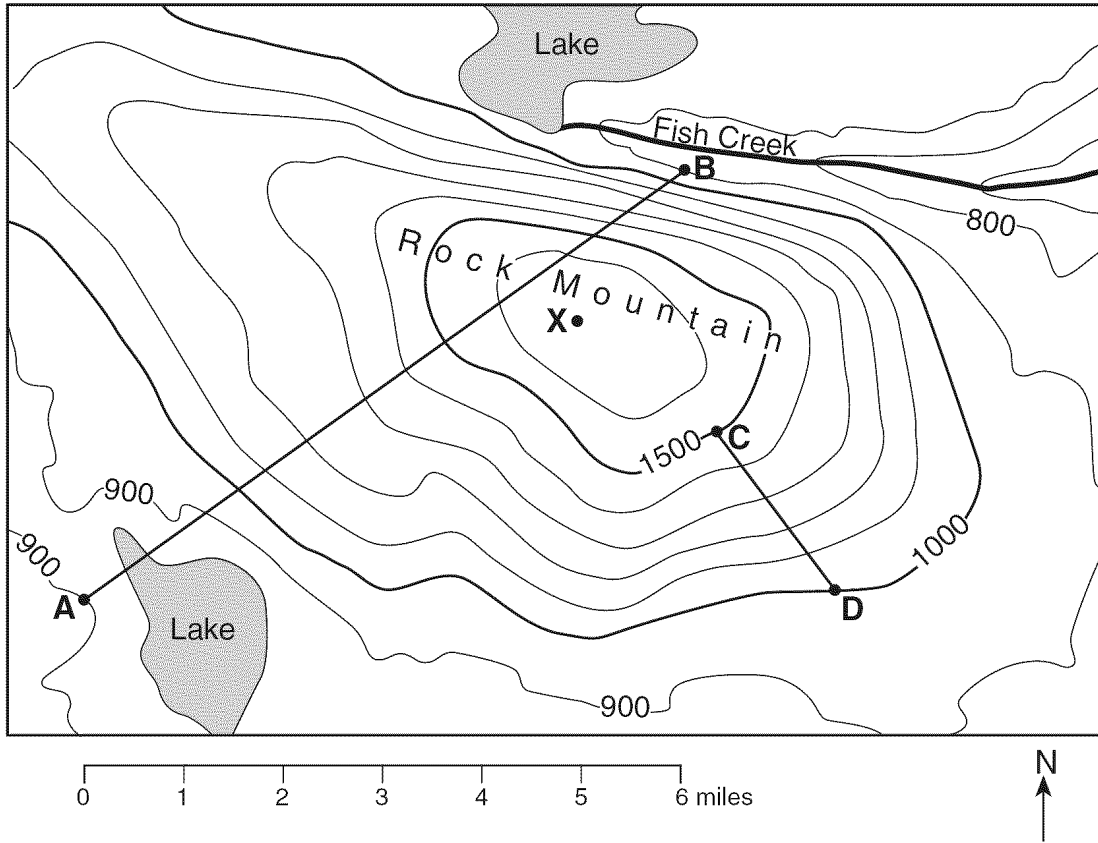7. A contour map is shown below. Elevations are shown in feet.

Which side of Amethyst Hill has the steepest slope?
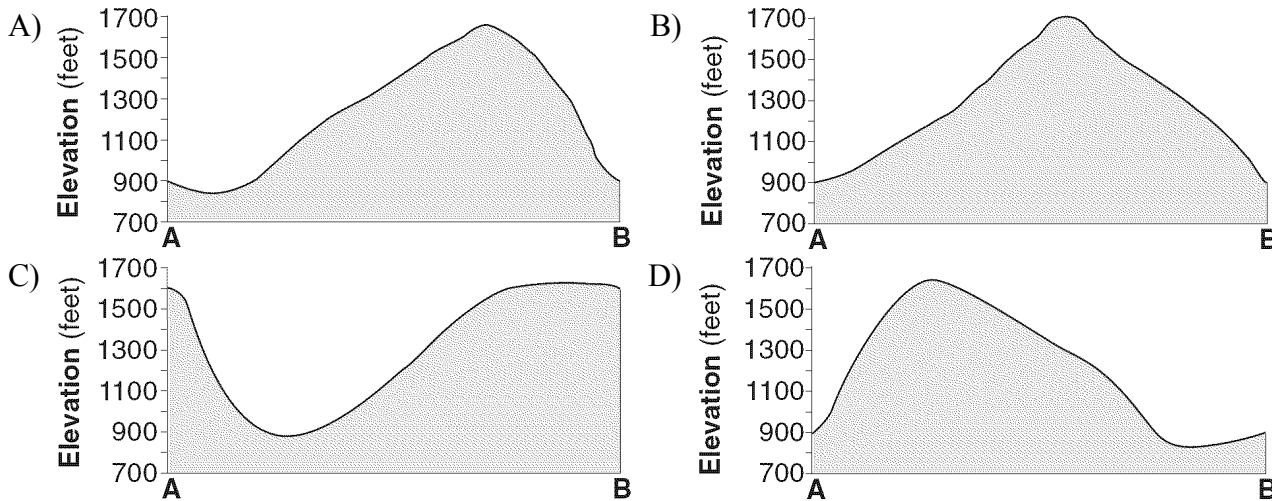
A) north   B) south   C) east   D) west

Base your answers to questions **8** and **9** on the topographic map below. Points *A, B, C, D,* and *X* represent locations on the map. Elevations are measured in feet.
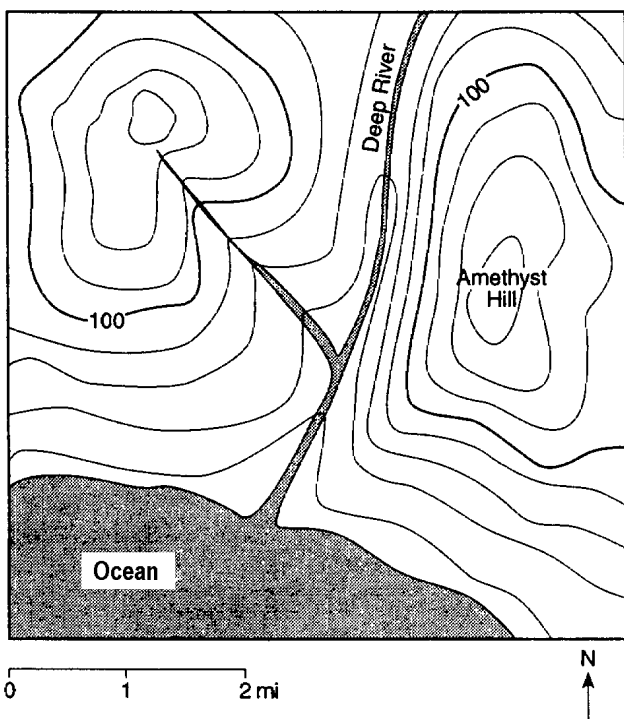

8. What is the highest possible elevation of point *X* on Rock Mountain?

A) 1,599 ft   B) 1,600 ft   C) 1,601 ft   D) 1,699 ft

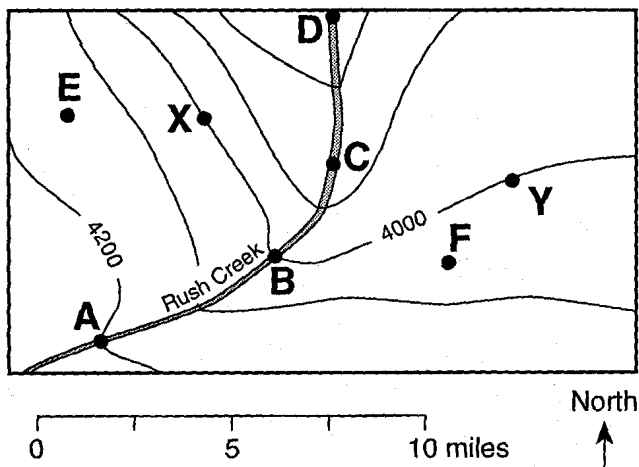9. Which cross section best represents the profile along straight line *AB*?

10. 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 **11** through **15** on the topographic map below. Points *A, B, C, D, E, F, X,* and *Y* are locations on the map. Elevation is measured in feet.

11. What is the contour interval used on this map?

A) 20 ft   B) 50 ft   C) 100 ft   D) 200 ft

12. Which locations have the greatest difference in elevation?

A) *A* and *D*   B) *B* and *X*
C) *C* and *F*   D) *E* and *Y*
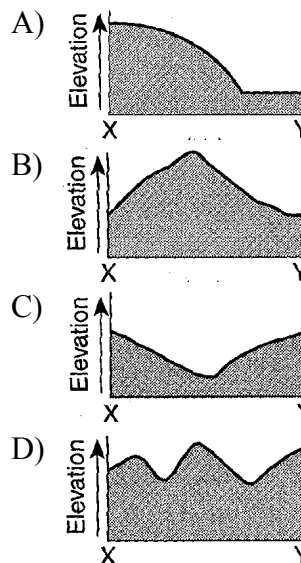
13. Between points *C* and *D*, Rush Creek flows toward the

A) north   B) south   C) east   D) west

14. The gradient between points *A* and *B* is closest to

A) 20 ft/mi   B) 40 ft/mi
C) 80 ft/mi   D) 200 ft/mi

15. Which diagram best represents the profile along a straight line between points *X* and *Y*?

1.   **B**
2.   **A**
3.   **C**
4.   **C**
5.   **B**
6.   **B**
7.   **D**
8.   **D**
9.   **A**
10.   **C**
11.   **C**
12.   **A**
13.   **A**
14.   **B**
15.   **C**