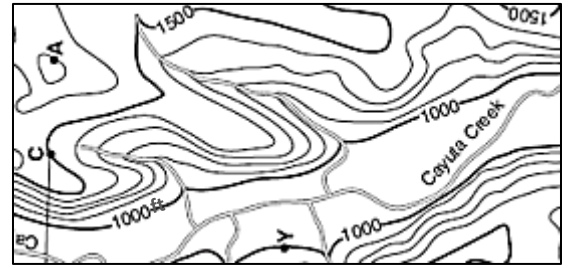


# Field Maps and Isolines Exam Review

## Task 1: Finding the Contour Interval

1. What is the interval of the map shown to the right? \_\_\_\_\_

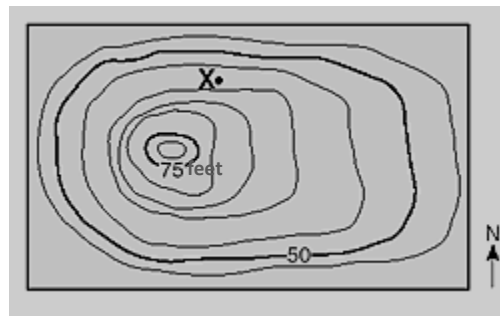


2. The map below shows the average yearly precipitation, in inches, across New York State.

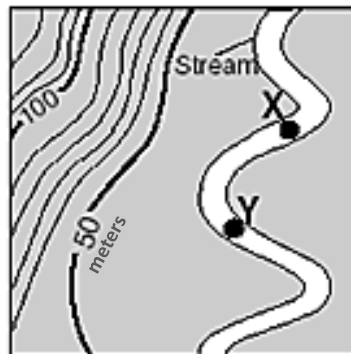
What is the interval of the map? \_\_\_\_\_



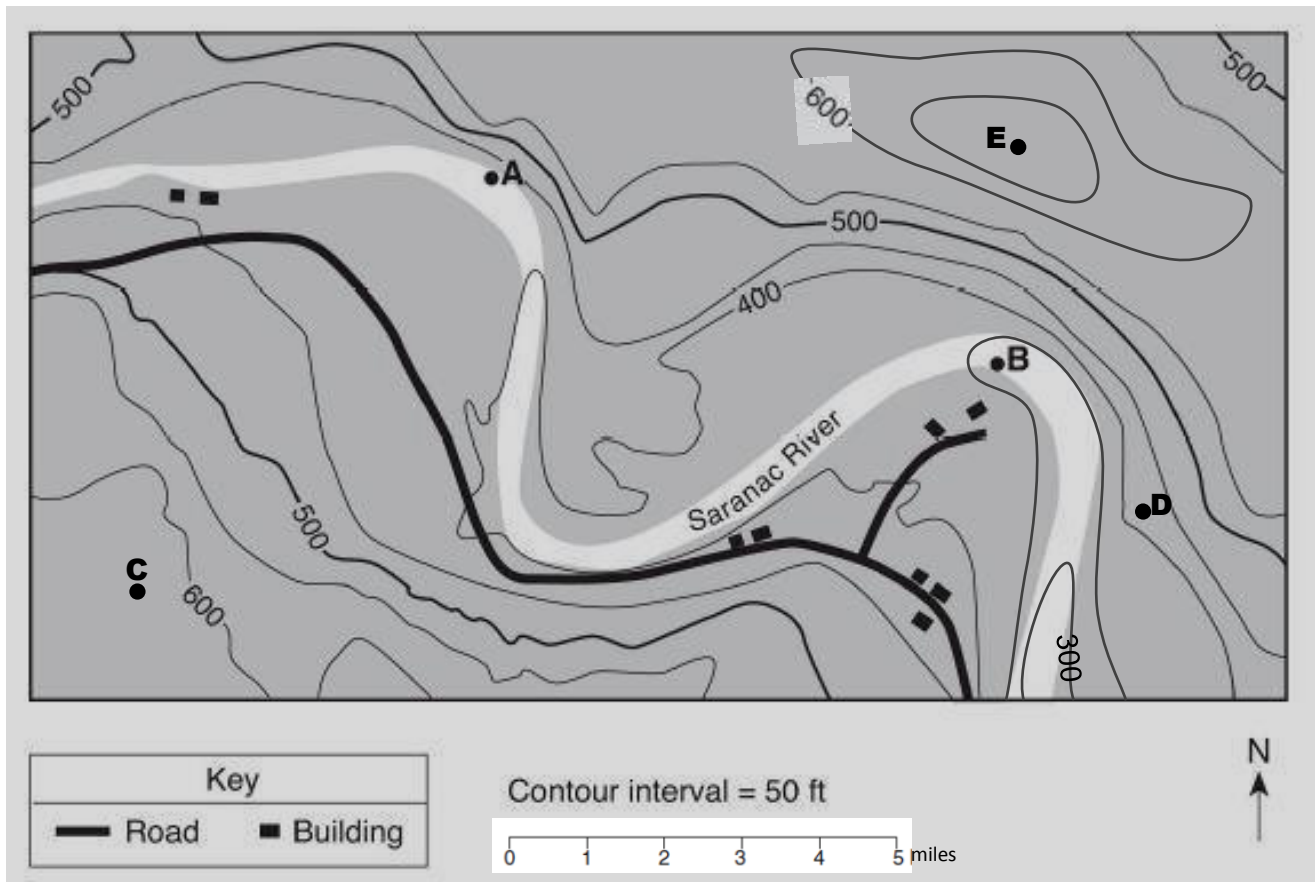
3. What is the interval of the map shown to the right? \_\_\_\_\_



4. What is the interval of the map shown to the right? \_\_\_\_\_



**Task 2: Finding the Value of a Point on a Field Map**



5. Circle the answer that best represents the elevation of each of the following points.

- |                 |       |       |       |       |
|-----------------|-------|-------|-------|-------|
| <b>Point A?</b> | 400ft | 440ft | 450ft | 460ft |
| <b>Point B?</b> | 400ft | 370ft | 350ft | 345ft |
| <b>Point C?</b> | 600ft | 700ft | 580ft | 630ft |
| <b>Point D?</b> | 420ft | 450ft | 470ft | 375ft |

6. What is the highest possible elevation of point E? \_\_\_\_\_

**Task 3: Measuring Distances**

Use the map on the top of the page to measure the distances between the following points:

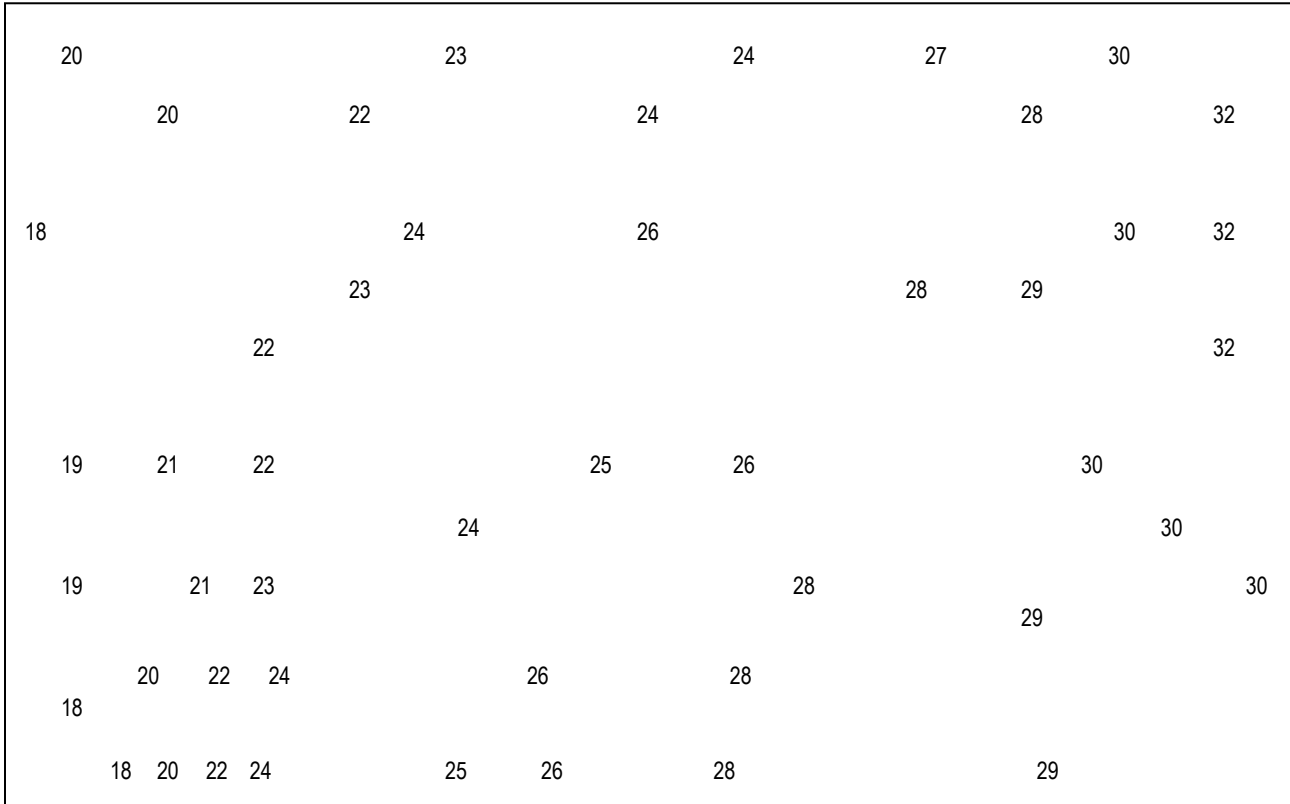
7. B to D \_\_\_\_\_
8. B to E \_\_\_\_\_
9. A to C \_\_\_\_\_

**Task 4: Drawing Isolines**

The map below represents temperatures of a field measured in degrees Celsius.

10. What is the name of the isolines that connect points of equal temperature? \_\_\_\_\_

11. Draw isolines at an interval of 2°C. Start with the 18°C line.



**Task 5: Gradients: Greatest (Steepest) versus Least (Most Gradual)**

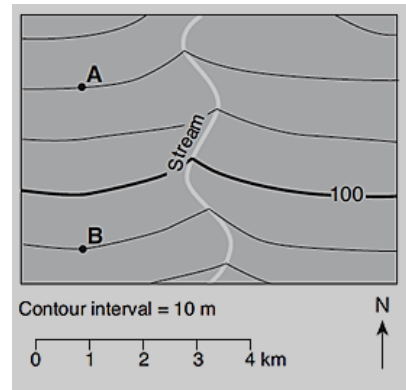
Use the temperature field map above to answer the following questions:

12. The greatest temperature gradient is nearest to which part of the field?  
(give a compass direction) \_\_\_\_\_

13. The least temperature gradient is nearest to which part of the field?  
(give a compass direction) \_\_\_\_\_

**Task 6: Calculating Gradient**

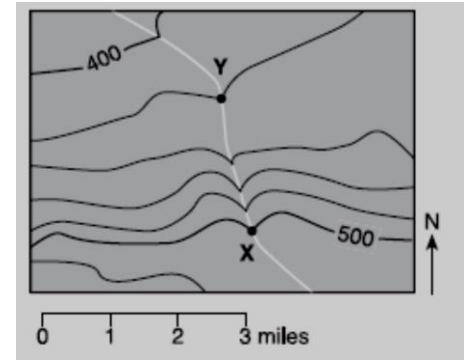
14. The topographic map below shows the location of a stream. Points A and B are locations on Earth's surface.



What is the gradient between points A and B?

- (1) 1 m/km                                      (3) 10 m/km  
 (2) 2 m/km                                      (4) 20 m/km

15. 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?



Write the formula, substitute data, and solve with correct units

**Task 7: Determining the Direction a River Flows**

16. How do elevation values help determine the direction of the flow of water in a river?

\_\_\_\_\_

17. How does the shape of the contour lines crossing a river indicate its direction of flow?

\_\_\_\_\_

18. Referring back to **question 14** at the top of the page, which direction is the stream flowing?

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

19. Referring back to **question 15** at the top of the page, toward which direction is the stream flowing?

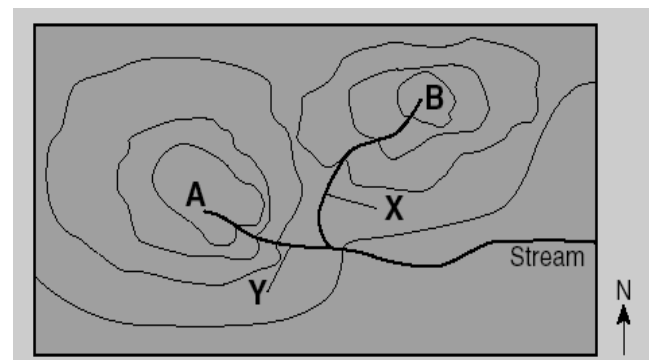
- (1) east    (3) north  
 (2) west    (4) south

20. In the diagram to the right, toward which direction is River X flowing?

\_\_\_\_\_

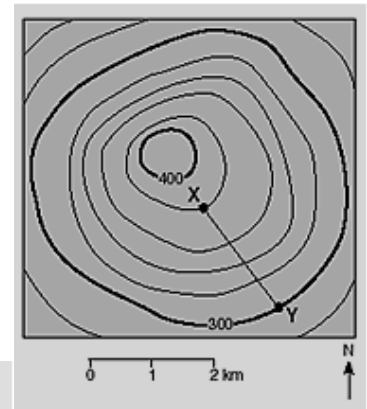
21. In the diagram to the right, toward which direction is River Y flowing?

\_\_\_\_\_

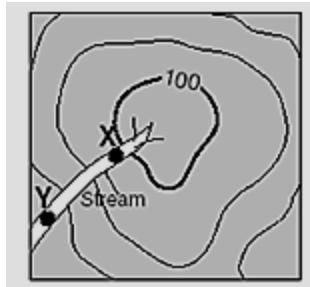


**Task 8: Hills versus Depressions**

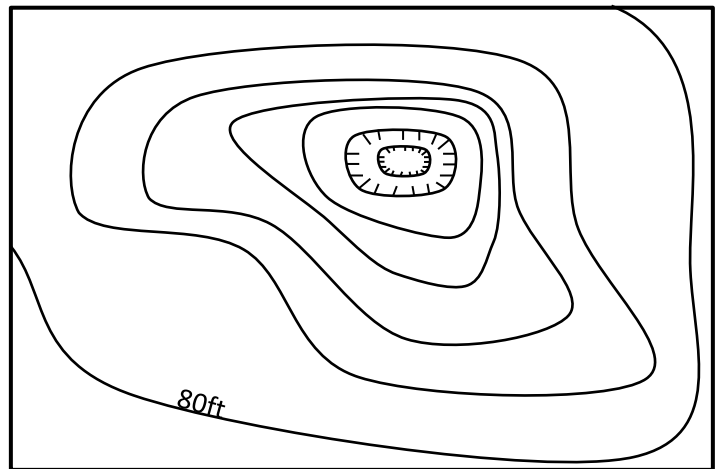
22. What is the contour interval of the map to the right? \_\_\_\_\_ meters
23. What is the highest possible elevation of the hill to the right? \_\_\_\_\_



24. If the interval of the map to the right is 50 meters, what is the highest possible elevation of the hill?
- \_\_\_\_\_



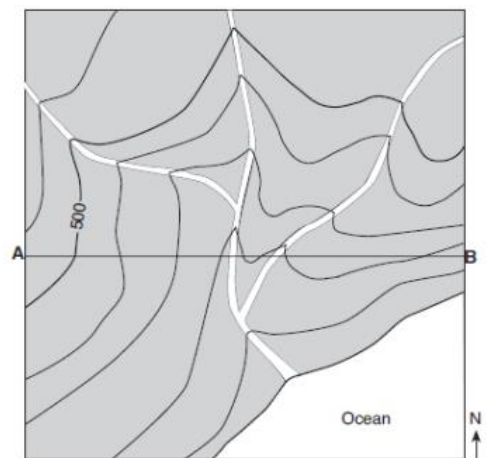
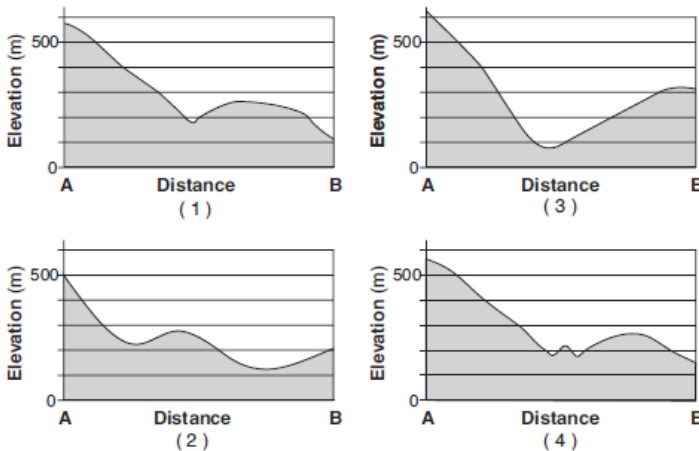
25. The contour interval of the map to the right is 20 feet. One of the lines has already been labeled, Label the rest of the lines with the appropriate value.



**Task 9: Interpreting Topographic Profiles**

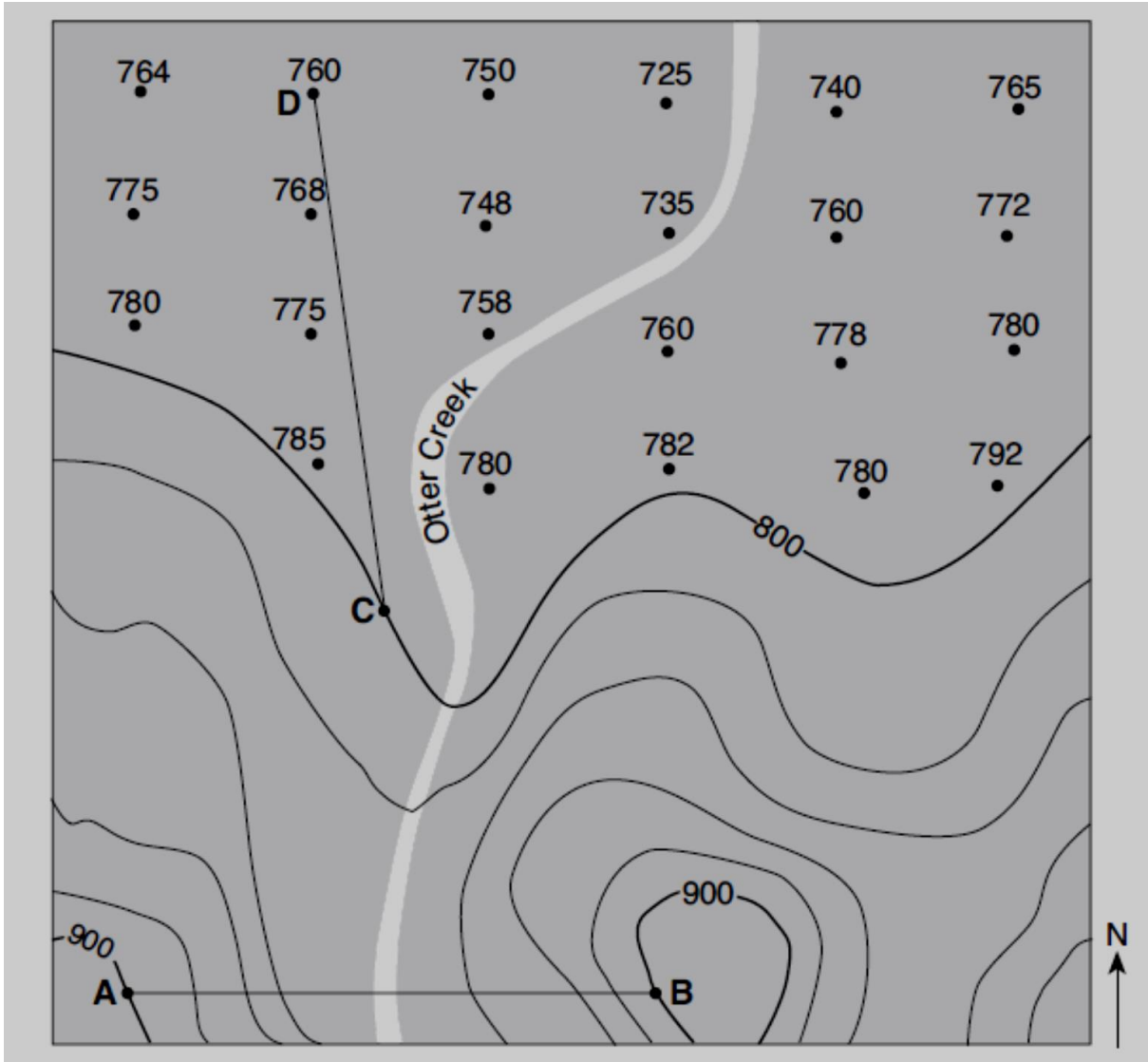
26. The contour map below shows elevations recorded in meters. Line AB is a reference line on the map.

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



Contour interval = 100 m

27. Draw contour lines for the 780-ft, 760-ft, and 740-ft elevations. Extend your contour lines to the edges of the map.



28. On the grid below, construct a topographic profile along line A-B by plotting the elevation of *each* contour line that crosses line A-B. Connect the plots with a line to complete the profile.

