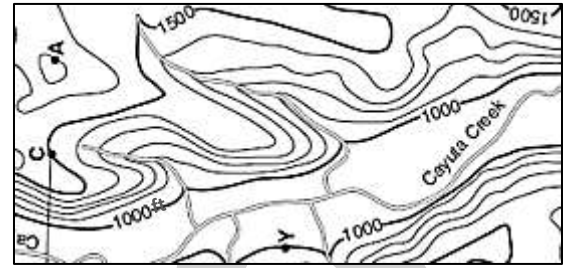# Field Maps and Isolines Exam Review

Task 1: Finding the Contour Interval

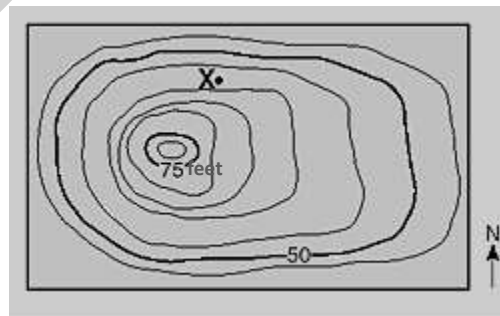1. What is the interval of the map shown to the right? _____

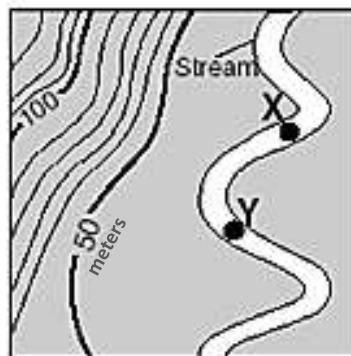2. The map below shows the average yearly precipitation, in inches, across New York State.

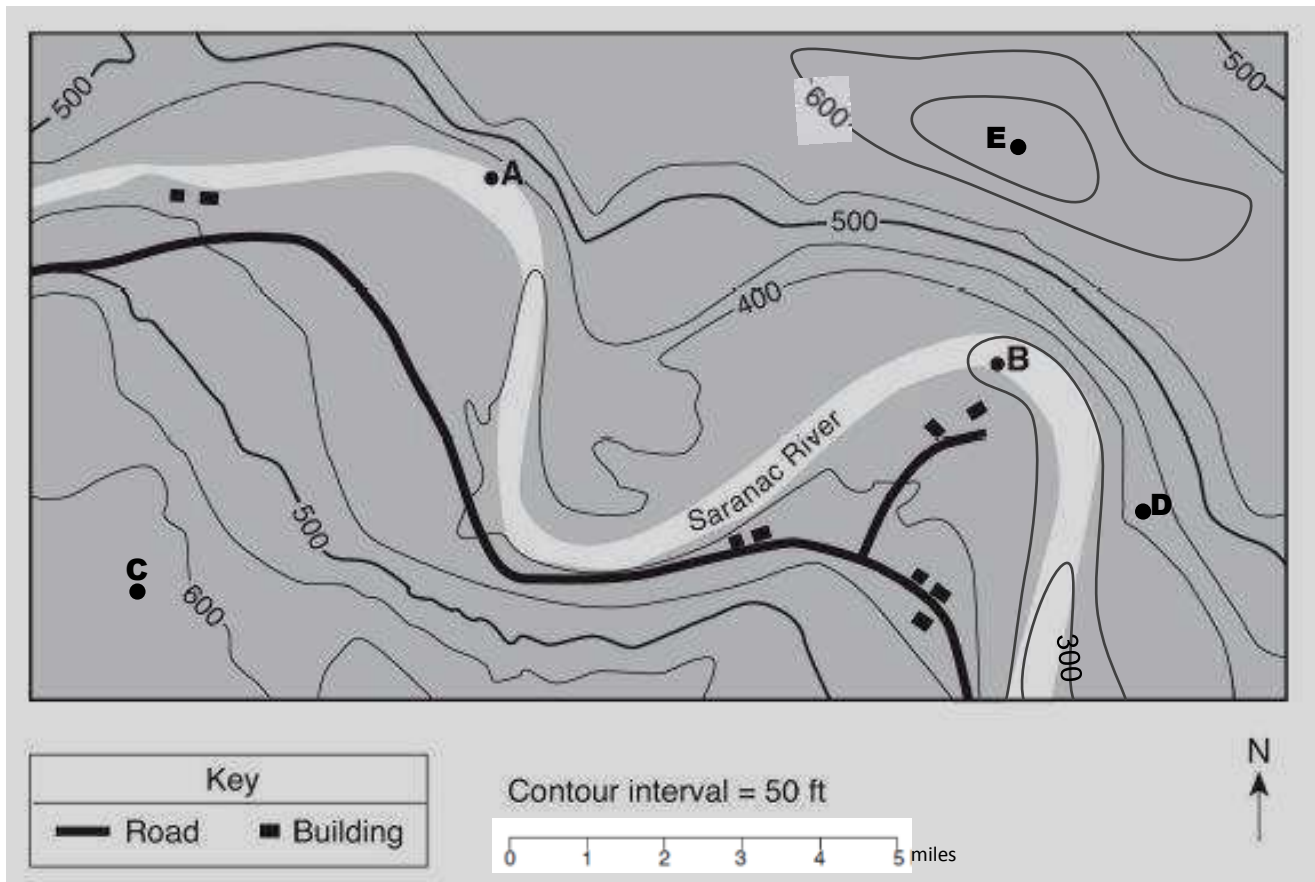   What is the interval of the map? _____

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.

Point A?	400ft	440ft	450ft	460ft
Point B?	400ft	370ft	350ft	345ft
Point C?	600ft	700ft	580ft	630ft
Point D?	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.

N
↑

```
20                    23              24        27        30

     20        22           24                  28        32


18                   24           26                  30    32

           23                              28    29

                22                                        32


19    21    22                 25      26            30

                24                                      30

19       21   23                      28                    30
                                           29

      20  22  24           26      28

18

    18  20  22  24        25    26      28              29
```

**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.
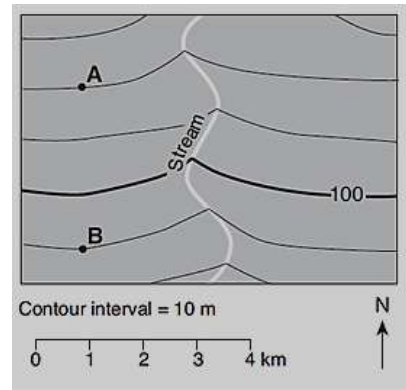
    What is the gradient between points *A* and *B*?
    (1) 1 m/km   (3) 10 m/km
    (2) 2 m/km   (4) 20 m/km

Contour interval = 10 m

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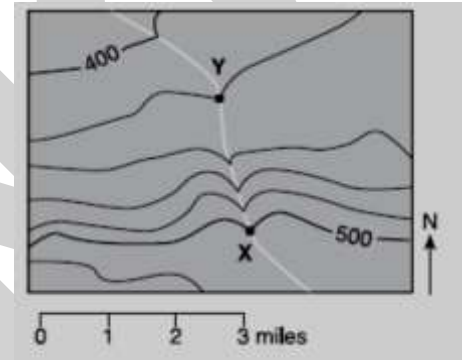
    Write the formula, substitute data, and solve with correct units

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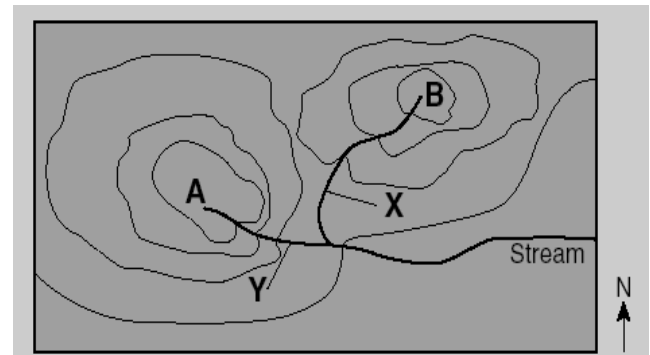   (1) west to east   (3) north to south
    (2) east to west   (4) south to north

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

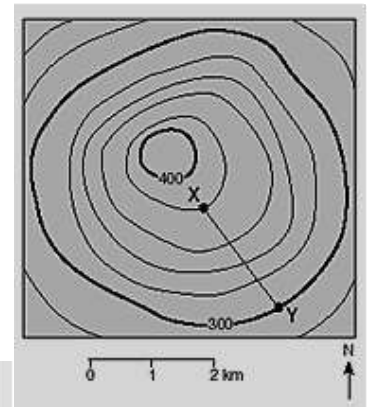20. In the diagram to the right, toward
    which direction is River X flowing?   _____

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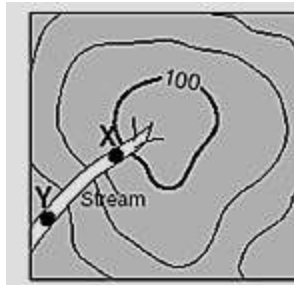   which direction is River Y flowing?   _____

Task 8: Hills versus Depressions

22. What is the contour interval of the map to the right? _____ meters
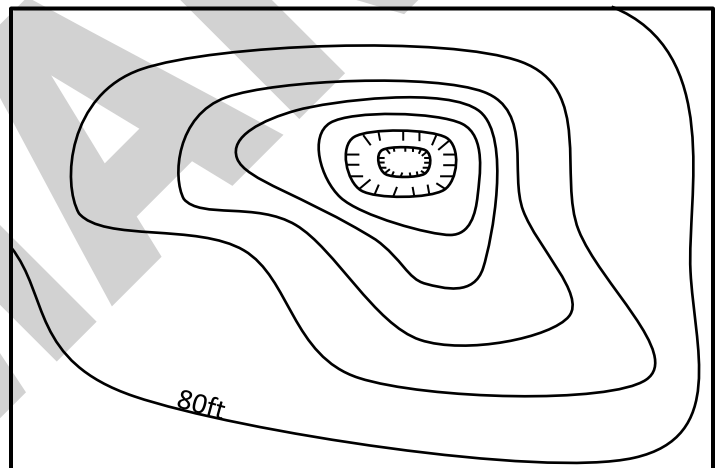

23. What is the highest possible elevation of the hill to the right? _____

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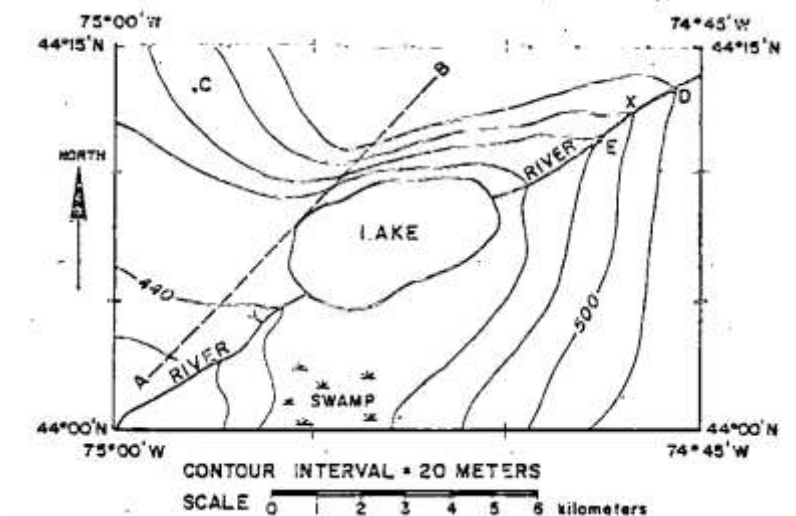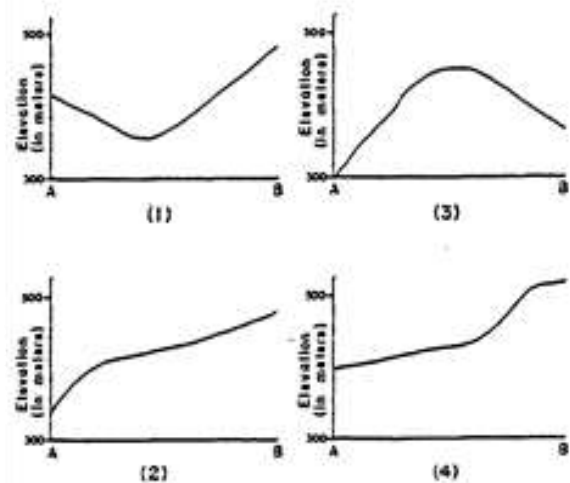
      _____

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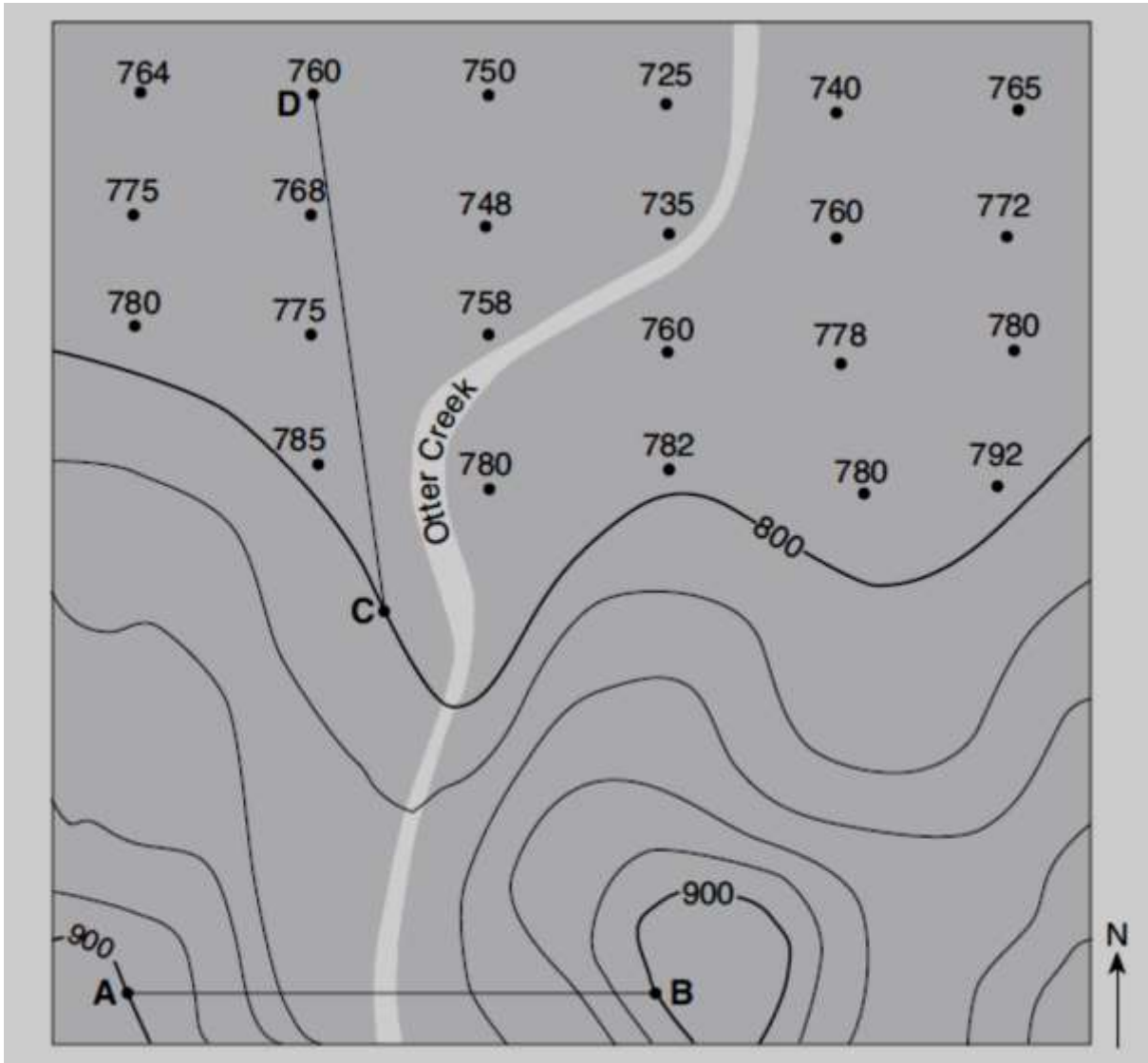   Label the rest of the lines with the appropriate value.

80ft

Task 9: Interpreting Topographic Profiles

26. Which of the following pictures best represents
     the landscape between points A and B?

CONTOUR INTERVAL = 20 METERS

SCALE 0   1   2   3   4   5   6 kilometers

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.