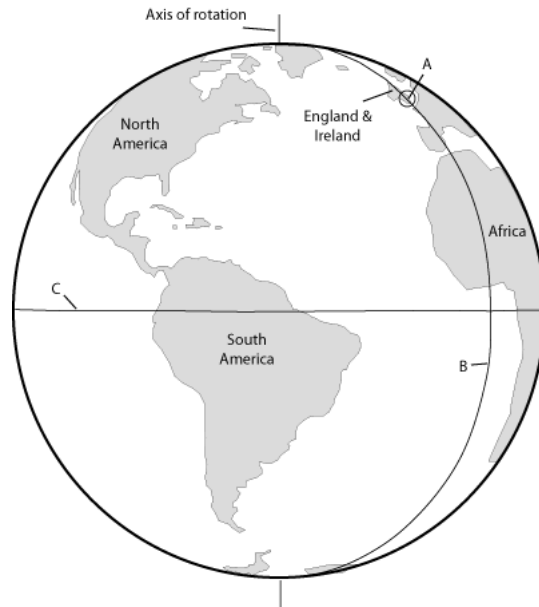# Topographic Maps – Practice Questions and Answers
Revised October 2007

1. In the illustration shown below what navigational features are represented by A, B, and C? Note that A is a critical city in defining the navigational feature labeled B.
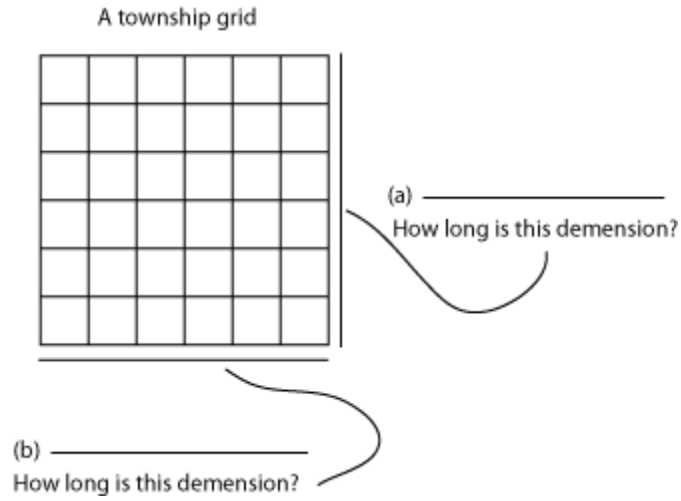

2. If you are located on zero degrees latitude, then you are on the _____.

3. Lines of longitude run _____ and _____.

4. The prime meridian lies at ____ degrees _____.

5. The prime meridian passes through _____, England.

6. Longitude is measured in degrees _____ or _____ of the prime meridian.

7. Latitude is measured in degrees _____ or _____ of the equator.

8. One degree of latitude equals
   a. 3600 seconds
   b. 3200 seconds
   c. 60 seconds
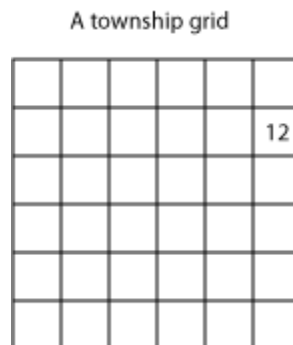   d. 1 second
   e. none of the above

9. One minute of longitude equals
   a. 3600 seconds
   b. 3200 seconds
   c. 60 seconds
   d. 3400 second
   e. none of the above

10. One degree of longitude equals
    a. 3600 minutes
    b. 3800 minutes
    c. 3400 minutes
    d. 60 minutes
    e. None of the above

11. Topographic maps that are bounded by lines of latitude and longitude are called
    _____ maps.

12. How many 7.5 minute quadrangles occur within a 15 minute sheet?
    a. 5
    b. 2
    c. 3
    d. 4
    e. none of the above

13. Where would you find the title of a 7.5 minute quadrangle?
    a. top right corner
    b. top left corner
    c. lower right corner
    d. lower left corner
    e. lower center

14. Where would you find the scale of a 7.5 minute quadrangle?
    a. lower right margin
    b. lower left margin
    c. middle lower margin
    d. middle upper margin
    e. none of the above

15. A 7.5 minute quadrangle covers how many degrees of longitude and latitude?

16. On a 7.5 minute quadrangle where can information about magnetic declination be found?
    a. lower right margin
    b. lower left margin
    c. middle lower margin
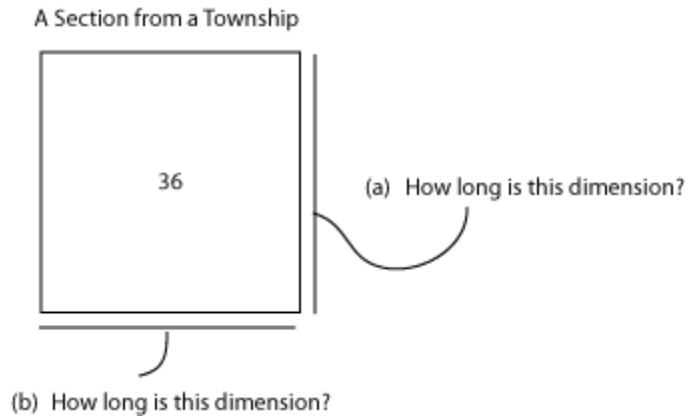   d. middle upper margin
    e. none of the above

17. Please fill in the answers to (a) and (b).

A township grid

(a) _____
How long is this demension?

(b) _____
How long is this demension?

18. In the following township, what section lies to the south of Sec. 12?

A township grid

12

19. Please answer questions (a) and (b) on the following illustration.

A Section from a Township

36

(a) How long is this dimension?

(b) How long is this dimension?

20. In the following township what sections lie immediately to the north and to the south of Sec. 8?

A township grid

8
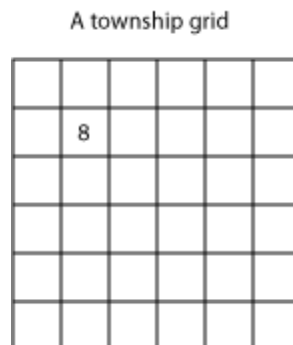
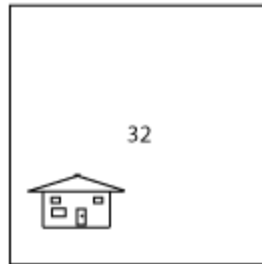21. In the following illustration of Sec. 21 from a T1N-R1E, how would you describe the location of the house?
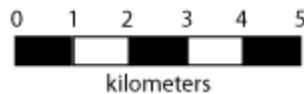
A Section from a Township

21
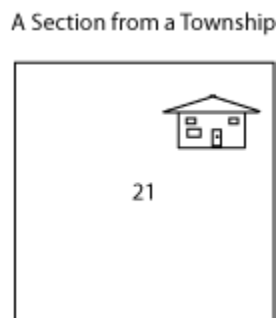
22. In the following illustration of Sec. 32 from T3S-R2W, how would you describe the location of the house?

A Section from a Township

32

23. What kind of scale is shown below?

0   1   2   3   4   5

kilometers

24. How many feet are there in an inch on a map if the scale is 1:24000?

25. How many feet are there in an inch on a map if the scale is 1:12000?

26. Magnetic North lies in what direction relative to geographic North if the magnetic declination is 14 degrees East?

27. What is the Bruton compass used to measure?

28. The North end of the compass needle ALWAYS points toward what direction?

29. If the magnetic declination is properly adjusted, then when the compass needle reads zero degrees, the sighting arm points in what direction?

30. The index pin is used to adjust what feature on the Bruton compass?

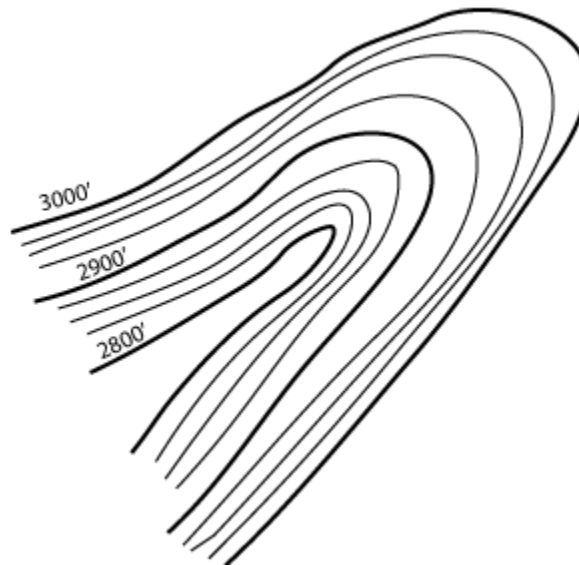31. Is magnetic North a stationary fixed point on the globe?

32. What kind of topographic landform is represented in the following illustration?
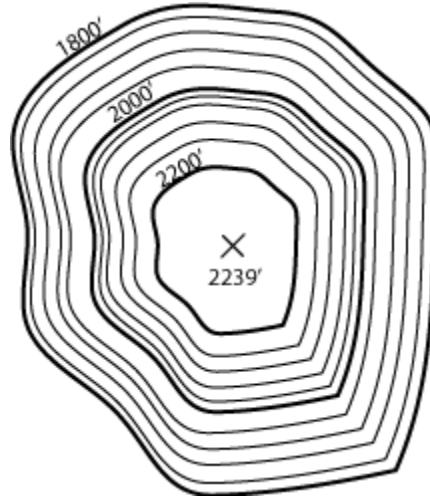
33. For the illustration in question #32 what are the bold contours called?
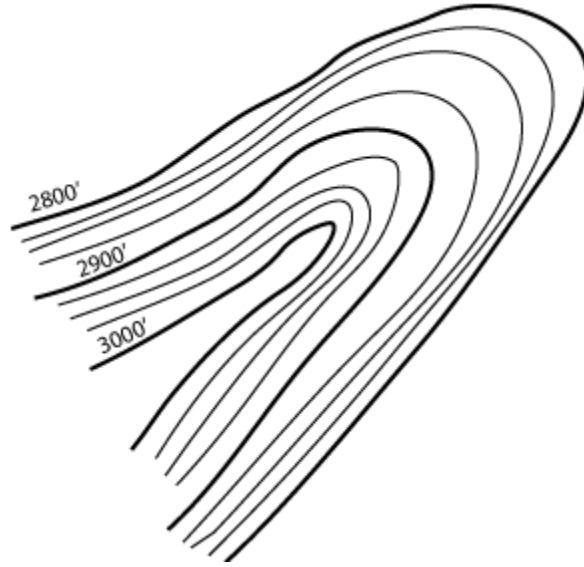
34. For the illustration in question #32 what is the contour interval?

35. What kind of topographic landform is represented in the following illustration?

36. For the illustration in question #35 what is the contour interval?

37. What kind of topographic landform is represented in the following illustration?

2800'

2900'

3000'

38. Topographic contour lines that are closer together than other contour lines indicate what?

39. If you were asked what do individual topographic contours on a given 7.5 minute quadrangle indicate, how would you respond?

40. What do contour lines that are uniformly spaced indicate?

Answers

1. A = Greenwish, England; B = prime meridian (0° longitude); C = equator (0° latitude)
2. equator
3. north, south
4. 0, longitude
5. Greenwich
6. East, West
7. North, South
8. a. 3600 seconds (one degree equals 60 minutes; one minute equals 60 seconds; 60 times 60 equals 3600 seconds)
9. c. 60 seconds
10. d. 60 minutes
11. quadrangle
12. d. 4
13. a. top right corner
14. c. middle lower margin.
15. 7.5 minutes of both longitude and latitude
16. b. lower left margin.
17. (a) = 6 miles; (b) = 6 miles
18. Sec. 13
19. (a) = 1 mile; (b) = 1 mile
20. Sec. 5 lies to the north; Sec. 17 lies to the south.
21. NE1/4, Sec. 21, T1N-R1E
22. SW1/4, Sec. 32, T3S-R2W
23. The image is a graphical scale
24. 2000 feet in an inch - Use the relationship that there are 12 inches in a foot. Hence, 24000 inches divided by 12 inches yields 2000 feet.
25. 1000 feet. See answer to question 24 for explanation of how to calculate this value.
26. 14 degrees east of geographic north
27. directions
28. magnetic North
29. North
30. The index pin is used to adjust the circular grid for magnetic declination
31. No, magnetic North is constantly moving.
32. hill or mountain
33. index contour
34. 40' (2200'-2000' = 200'; 200'/5 = 40')
35. valley or ravine
36. 25' (3000'-2900' = 100'; 100'/4 = 25')
37. ridge
38. steeper slopes
39. Each topographic contour represents a curve of equal elevation. In other words, if you were to walk along a given contour, then you would be walking along a horizontal surface
40. a constant slope