

BASIC CLASS

Quiz #3: Land Navigation and Wilderness Travel

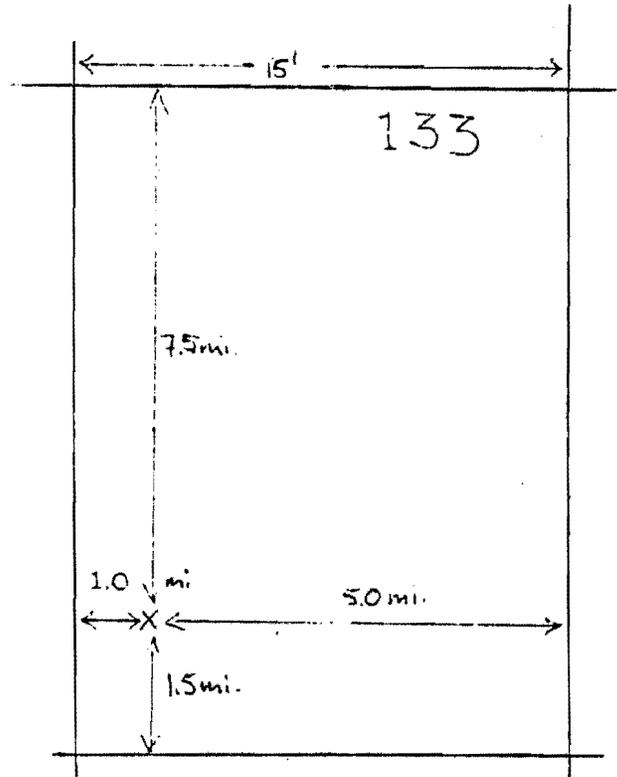
KEY

1. The bottom left-hand corner of a $7\frac{1}{2}'$ topographic quadrangle map is specified by the coordinates $38^{\circ}N, 78^{\circ}W$. The coordinates of the top right-hand corner are:

- a. $39^{\circ}N, 79^{\circ}W$
- b. $38^{\circ}7'50''N, 77^{\circ}92'50''W$
- c. $38^{\circ}7'30''N, 77^{\circ}52'30''W$
- d. $38^{\circ}7'30''N, 78^{\circ}7'30''W$

2. Refer to the figure at the right. It represents a portion of a gridded aeronautical chart. The UMS coordinates of the point "X" are:

- a. 133 7.5 1.0
- b. 133 C 1.0, 1.5
- c. 133 B 1.5, 1.0
- d. 133 C 1.5, 1.0



3. Refer to the ASRC-gridded map on the last page. Newcomb Mountain is at coordinates:

- a. A2119
- b. A1921
- c. C2119
- d. A2.0, 2.0

Refer again to the last page. Match the feature to the coordinates.

4. A3802 <u>A</u>	a. Junction 29 & 745
5. A2709 <u>BD</u>	b. Cemetery
6. A2408 <u>B</u>	c. Gap SW of Newcomb Mtn.
7. A2017 <u>C</u>	d. BM 630

for question 2

8. A0413 <u>B</u>	a. Woodson Mtn. peak 1297
9. A1712 <u>A</u>	b. Woodson Mtn. peak 1167
10. A1906 <u>C</u>	c. saddle ~700m SSE of peak 1297
11. A0643 <u>D</u>	d. orchard

Refer to the figure on the next page for the following questions. (12-16)

12. The ^{MAGNETIC} declination marked on this map is:

- a. 5 degrees West
- b. 5 degrees East
- c. $1^{\circ}25'$ East
- d. $6^{\circ}25'$ West

13. This map covers an area:

- a. 7.5' x 7.5'.
- b. 20 km. x 30 km.
- c. 440 acres.
- d. 15' x 15'.

14. The elevation difference between any two brown lines on this map is:

- a. 1/24000 mile.
- b. 20 meters.
- c. 20 feet.
- d. 40 feet.

15. The quadrangle south of this one is:

- a. Alberene.
- b. Schuyler.
- c. Esmont.
- d. can't tell from available information.

16. Most of the information on the map is accurate as of _____ years ago (1979⁸¹).

- a. 12/4
- b. 15/7
- c. 52/54
- d. 8/10

17. Refer to the ^{AERONAUTICAL PROVIDED} ~~map on the next to last page.~~ A CAP aircraft has radioed you that he has an ELT signal 20 miles out radial 003° from the Gordonsville VOR. What grid is this in?

MAP SCALE: 1 1/4" = 10 miles

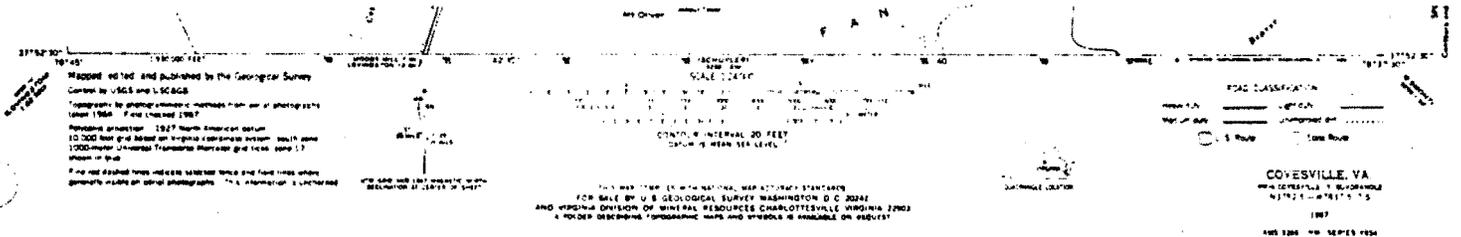
- a. CINCINNATI 196 B
- b. CINCINNATI 196 C
- c. CINCINNATI 196 D
- d. Washington 173C

18. You are asked to proceed to the intersection of Victor airway 222N and Victor airway 223 . This puts you in grid:

- a. Washington 201 A
- b. Washington 201 B
- c. Washington 201 C
- d. Washington 279 A

19. A magnetic compass needle will always point at the magnetic north pole, unless a ferromagnetic object is held in close proximity to it (i.e. 2-3 feet).

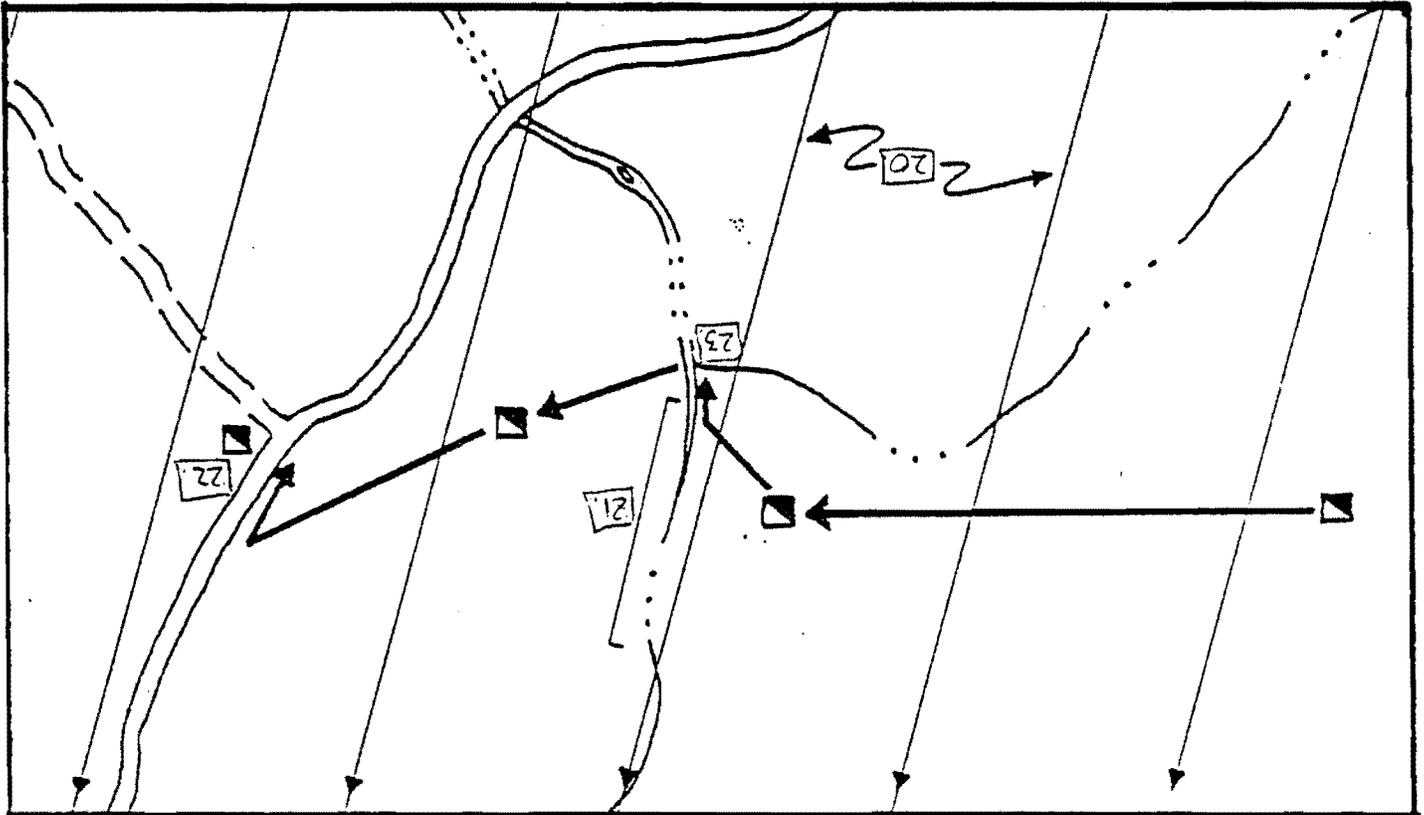
- a. true
- b. false



AN ORIGINAL IS PROVIDED FOR YOUR USE.

Refer to the figure below for 20-23. Match the letter of the appropriate orienteering concept to the number on the figure.

- 20. D a. attack point
- 21. B b. catching feature
- 22. C c. aiming off
- 23. A d. northing lines



For 24-27, refer to the last page. Find the number corresponding to the question; nearby will be two points labeled A and B. Use the following to describe the relative elevation of the two points.

- a. A is higher than B
- b. B is higher than A
- c. A and B are at the same elevation
- d. can't tell from the available information

- 24. ~~A~~ B
- 25. A
- 26. B
- 27. A

ANSWERS WERE BY
USED MORE THAN ONE.

- 28. You are on Newcomb Mtn. You wish to find a direct magnetic bearing to Bear Den Mtn. It is:

49.5° MAG.

29. You are following a telephone line cut across the Ragged Mountains. You are on a ridge, and you can see Bear Den Mtn. at 74° magnetic. You are at:

BAD

- a. A1021
- b. A1320
- c. A1419
- d. A1818

$$\begin{array}{r}
 + 120 \\
 254 \\
 \hline
 248.50 \\
 (60.5)
 \end{array}$$

30. You have received a radio message from a CAP mission coordinator. He wants you to take your ELT-df equipped rescue team to a crash site which has been roughly located by CAP ground teams. The bearings the CAP obtained:

From	Bearing (true)
A3802	315°
A2038	177°
A3229	236°

$$\begin{array}{r}
 315 \\
 - 180 \\
 \hline
 135
 \end{array}$$

$$\begin{array}{r}
 236 \\
 - 180 \\
 \hline
 56
 \end{array}$$

The crash site is probably near:

- a. the SW slope of Newcomb Mtn.
- b. the ridge of Newcomb Mtn.
- c. the ravine high up on the N side of peak 1297 of Woodson Mtn.
- d. the ravine just E of peak 1297 of Woodson Mtn.

~~31. You have lost your pack and compass at Dolly Sods. It is just after sunset, and it is getting cold, but it is a clear night with enough moonlight for travel. You know that there is a road along the eastern edge of the wilderness plateau. You can identify the constellation Orion, the hunter, but no others. Orion is on the horizon. You should:~~

- ~~a. head towards Orion, then bear left from it so that it is at your right at midnight.~~
- ~~b. head away from Orion, then bear right from it so that it is at your left at midnight.~~
- ~~c. head straight away from Orion.~~
- ~~d. navigate in a manner different from the above.~~
- ~~e. give up and die of embarrassment for having become separated from your pack.~~

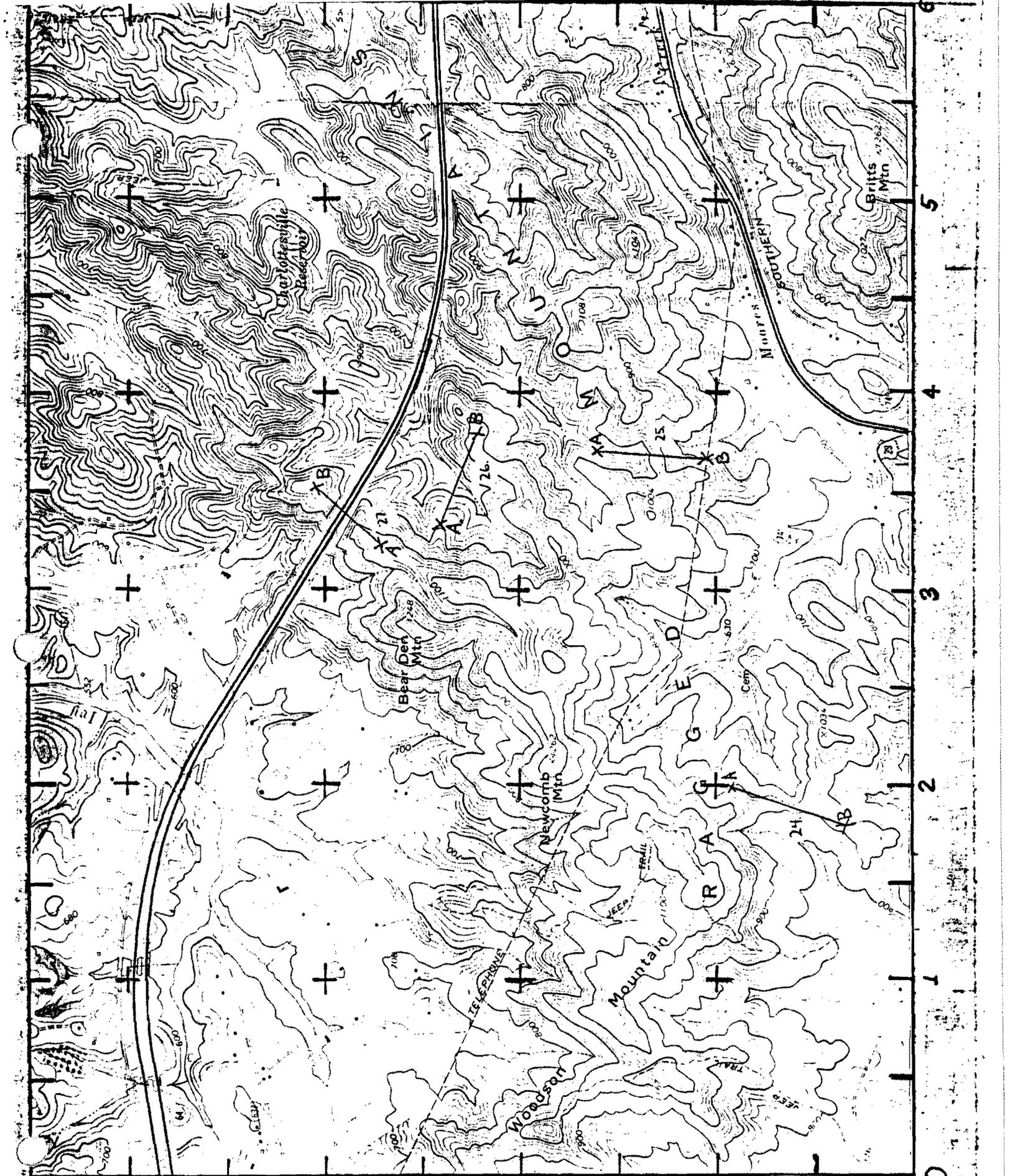
32. When hiking on an established trail, you should not "cut across" switchbacks because:

- ~~a. It is against the law.~~
- ~~b. You might get lost.~~
- ~~c. Cutting off switchbacks promotes erosion.~~
- ~~d. Trails are designed to be followed.~~

33. Fires cause damage to dirt by destroying normal soil bacteria.

- a. True
- b. False

34. Round streambed-type rocks should not be used in or near fires.
a. True
b. False
35. The rest step is a method for maintaining a steady very slow uphill pace.
a. True
b. False
36. When hiking downhill, boots should be tightly laced or "stuffed full of sock" so as to prevent toe blisters.
a. True
b. False
37. When traveling downhill, the knees should never be bent or flexed, as this may cause bursitis of the knee, or "water on the knee".
a. True
b. False
38. "squeak heel", or tendonitis of the Achilles tendon sheath, is a problem caused by boots tight at the ankle, and for which the only cure is rest.
a. True
b. False
39. When hiking strenuously, a stop of 15 minutes will remove about $\frac{1}{2}$ of the accumulated waste ("fatigue"), while another 15 minutes of rest will remove only about 5% more waste.
a. True
b. False
40. The best treatment for muscle cramps (other than heat cramps) is:
a. very hard massage of the muscle.
b. stretching the muscle.
c. eating several salt tablets.
d. drinking lots of water.
41. Fat has about twice as much energy per unit weight as either protein or carbohydrate, but is not as easily digestible.
a. True
b. False
41. Most of the insulation around a hiker's foot comes from boots, not socks, so thick boots should always be worn.
a. True
b. False
43. Ticks should not be pulled out, but must be persuaded to let go.
a. True
b. False



ft	ft/m
100	4.2
200	8.3
300	12.5
400	16.7
500	20.8

MAP A
DECL 0° W
5 1/2 W

4

3

2

1

0

1

2

3

4

5