

BASIC CLASS

Quiz #3: Land Navigation and Wilderness Travel

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

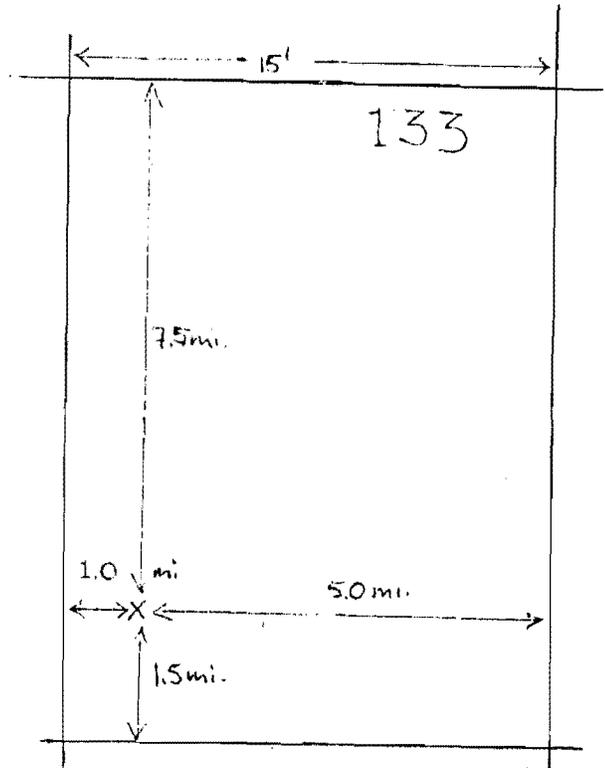
3. Refer to the ASRC-gridded map on the last page. Newcomb Mountain is at coordinates:

- 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 _____ | a. Junction 29 & 745      |
| 5. A2709 _____ | b. Cemetery               |
| 6. A2408 _____ | c. Gap SW of Newcomb Mtn. |
| 7. A2017 _____ | d. BM 630                 |

- |                 |                                  |
|-----------------|----------------------------------|
| 8. A0413 _____  | a. Woodson Mtn. peak 1297        |
| 9. A1712 _____  | b. Woodson Mtn. peak 1167        |
| 10. A1906 _____ | c. saddle ~700m SSE of peak 1297 |
| 11. A0643 _____ | d. orchard                       |



for question 2

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

12. The 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:
- 7.5' x 7.5'.
  - 20 km. x 30 km.
  - 440 acres.
  - 15' x 15'.
14. The elevation difference between any two brown lines on this map is:
- 1/24000 mile.
  - 20 meters.
  - 20 feet.
  - 40 feet.
15. The quadrangle south of this one is:
- Alberene.
  - Schuyler.
  - Esmont.
  - can't tell from available information.
16. Most of the information on the map is accurate as of \_\_\_\_\_ years ago (19<sup>81</sup>29).
- 12/14
  - 15/17
  - 52/54
  - 8/10

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

- CINCINNATI 196 B
- CINCINNATI 196 C
- CINCINNATI 196 D
- Washington 173 C

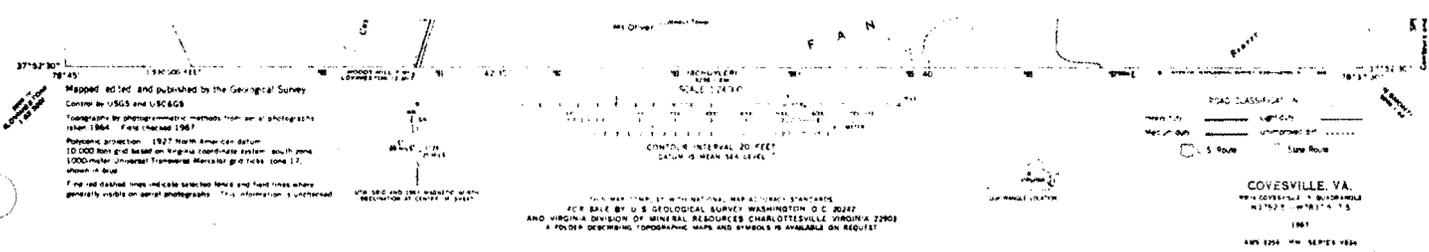
MAP SCALE: 1 1/4" = 10 miles

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

- Washington 201 A
- Washington 201 B
- Washington 201 C
- 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).

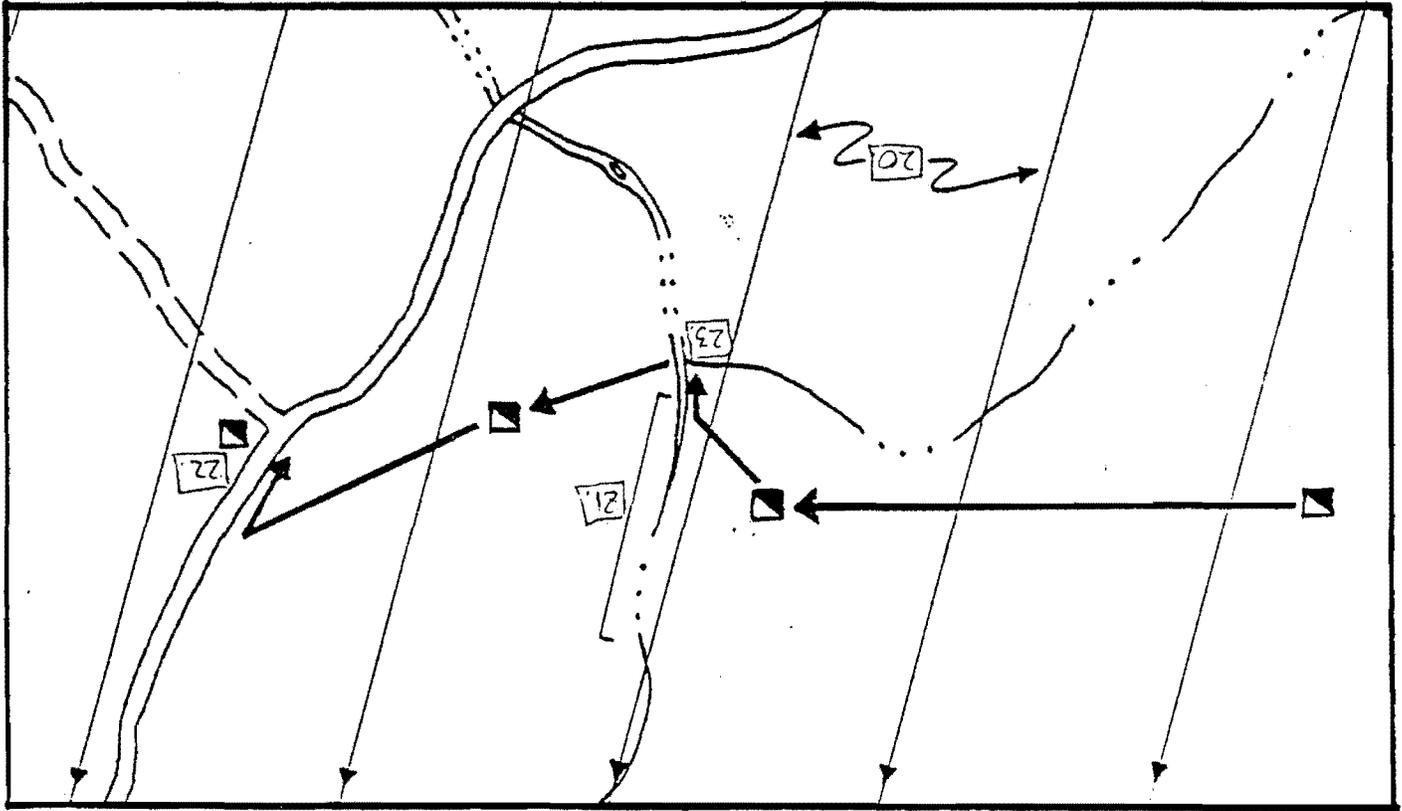
- true
- false



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. \_\_\_\_\_ a. attack point
- 21. \_\_\_\_\_ b. catching feature
- 22. \_\_\_\_\_ c. aiming off
- 23. \_\_\_\_\_ 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. \_\_\_\_\_
- 25. \_\_\_\_\_
- 26. \_\_\_\_\_
- 27. \_\_\_\_\_

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

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  $74^{\circ}$  magnetic. You are at:

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

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:

<u>From</u>	<u>Bearing (true)</u>
A3802	$315^{\circ}$
A2038	$177^{\circ}$
A3229	$236^{\circ}$

The crash site is probably near:

- a. the SW slope of Newcomb Mtn.
- b. the ridge E 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.~~

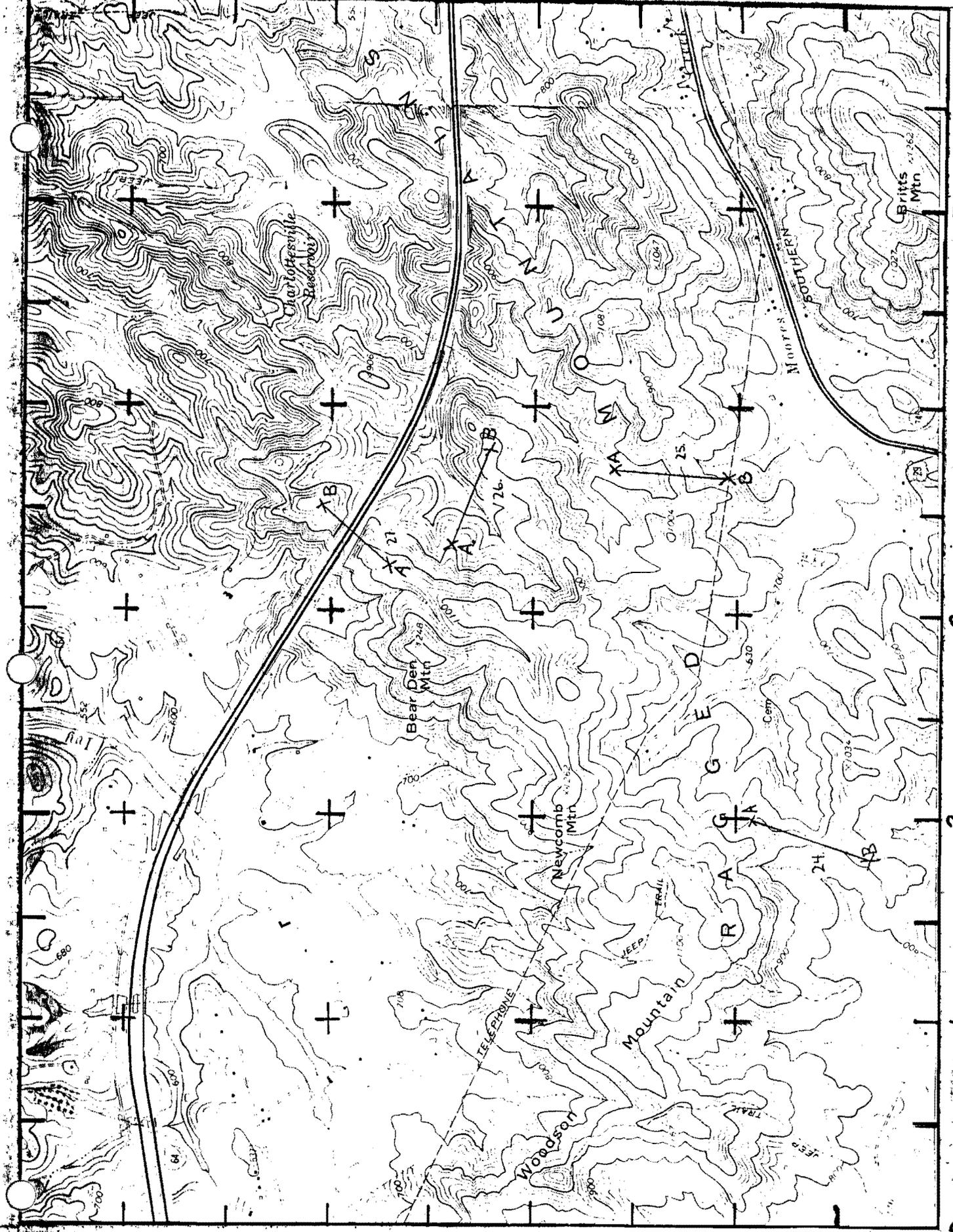
32. When hiking on an established trail, you should not "cut across" switchbacks because:

- 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.
- True
  - False
35. The rest step is a method for maintaining a steady very slow uphill pace.
- True
  - False
36. When hiking downhill, boots should be tightly laced or "stuffed full of sock" so as to prevent toe blisters.
- True
  - 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".
- True
  - 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.
- True
  - 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.
- True
  - False
40. The best treatment for muscle cramps (other than heat cramps) is:
- very hard massage of the muscle.
  - stretching the muscle.
  - eating several salt tablets.
  - 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.
- True
  - False
41. Most of the insulation around a hiker's foot comes from boots, not socks, so thick boots should always be worn.
- True
  - False
43. Ticks should not be pulled out, but must be persuaded to let go.
- True
  - False



ft	M
100	4.2
200	8.3
300	12.5
400	16.7
500	20.8

MAP A  
DECL 0° N

0 1 2 3 4 5 6

4

3

2

1

0

