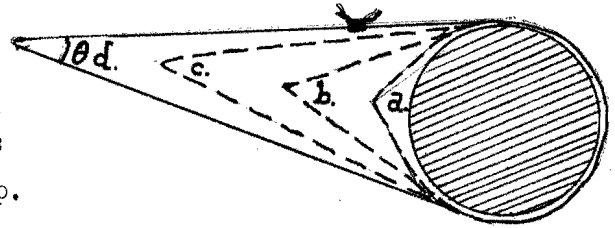


Quiz #2: Ropework

1. Which of the following is not a significant source of permanent rope damage?
  - a. abrasion of rope on rock, ice, or trees
  - b. frequent bending or twisting of the rope
  - c. dirt which is ground into the rope fibers
  - d. strain caused by hard falls or very heavy loads
2. Which of the following is the strongest way to rig a sling anchor?
  - a.  $\theta = 120^\circ$
  - b.  $\theta = 60^\circ$
  - c.  $\theta = 45^\circ$
  - d.  $\theta = 20^\circ$
3. When using a runner, it is strongest when:
  - a. used as a simple loop over a tree stump.
  - b. girth hitched around a tree stump.
  - c. doubled around a tree stump.
4. Which of the following is not an important element of good belaying?
  - a. the braking hand never leaves the rope
  - b. the elbows are kept close to the body and don't get behind the hips
  - c. the belayer must always be sitting
  - d. in a hip belay, the rope must run around the hips, not the waist
5. Which of the following causes the greatest permanent damage to rope?
  - a. water
  - b. sunlight
  - c. gas and oil
  - d. car battery fluid
6. Which of the following is an advantage of a doubled runner around a tree, compared with a runner girth hitched around a tree?
  - a. doubled runner is stronger
  - b. doubled runner is less likely to cross-load the carabiner
  - c. doubled runner is less likely to slip
7. A large rock falls on a rope. The rope is pull-tested by 6 heavy men, and does not break. The rope is safe for use.
  - a. True
  - b. False
8. It is important to keep carabiner hinges well-lubricated, so they will work smoothly.
  - a. True
  - b. False
9. Stepping on a rope causes invisible damage by grinding dirt into the fibers.
  - a. True
  - b. False



(Matching continued)

25. A tie-in method which must be cut in at least two places to fail.
- square knot (reef bend)
  - clove hitch
  - half hitch
  - ASRC harness
26. How does one place a rope on the ground so it pays out freely?
- coiling
  - stacking randomly
  - stacking in neat figure 8s
27. The proper call to request a belayer to take up slack in a rope is:
- UP ROPE!
  - SLACK!
  - TAKE IN!
  - FORWARDS!
28. Which of the following knots is strongest in rope?
- grapevine (double fisherman's) knot (barrel bend)
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  - square knot
29. Which of the following knots is least prone to jamming in rope?
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30. Which knot might be appropriate for 'tying out' a damaged section of rope?
- bowline
  - butterfly
  - figure 8 loop
  - square knot (reef bend)
31. Which of the following ascender devices has the greatest reliable strength on 7/16" (11mm) rope?
- Prusik knot of 3/8" polypropylene
  - Gibbs ascender
  - Jumar ascender
32. With which of the following rappels is a bottom ("fireman's") belay not effective?
- figure 8 descender
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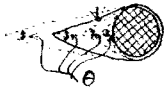
33. Brake bars may cause side-loading of carabiners, which is considered dangerous due to low carabiner strength in this axis.
- True
  - False
34. Blue Water caving rope is more resistant to abrasion than Goldline mountain lay rope for light abrasion; the opposite is true for heavy abrasion.
- True
  - False
35. Most ropes designed for lead climbing have a parallel-fiber core, whereas static caving ropes (e.g. Blue Water) have a braided or twisted core construction.
- True
  - False
36. Which of the followin is a reason for using Blue Water rope instead of Goldline for mountain rescue?
- Blue Water has a greater capacity for energy absorption
  - Blue Water is more resistant to heavy abrasion
  - Blue Water is more easily examined for damage
  - Blue Water handles better
37. "Army" or "Ranger" rappels, using a diaper seat and a single non-locking carabiner for a biner wrap, are extremely dangerous. Which of the following is not a hazard with this rappel method?
- Diaper seat slings will fail if cut in just one place, and may slip up and cause loss of control.
  - Weld abrasion of the seat by the rope is a common and severe problem when just one biner is used.
  - A biner-wrap rappel cannot develop adequate braking force for a controlled rappel.
  - Non-locking carabiners may twist around and unclip easily.
38. "True double redundancy" (a redundant phrase in itself) in an ascending rig means:
- each part of the rig is doubled.
  - two points of contact with the rope.
  - any one point of contact with the rope may be removed, leaving the person in a satisfactory stance (e.g. not hanging upside down by a foot).
39. Nylon ropes are slightly weaker when wet than dry, but are not permanently affected by water.
- True
  - False
40. Although nylon has a melting point of about 250°C, damage occurs at about 150°C, which is easily reached on the back shelf of a car parked in the sun on a summer day.
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KEY

BLUE RIDGE MOUNTAIN RESCUE GROUP  
BASIC CLASS

10Oct79KC  
page 1/4

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- |     |     |     |     |
|-----|-----|-----|-----|
| 1b  | 11a | 21c | 31a |
| 2ad | 12d | 23b | 32b |
| 3c  | 13c | 23a | 33a |
| 4c  | 14b | 24c | 34a |
| 5d  | 15c | 25d | 35b |
| 6a  | 16a | 26b | 36d |
| 7b  | 17d | 27a | 37c |
| 8b  | 18b | 28a | 38c |
| 9a  | 19a | 29d | 39a |
| 10b | 20d | 30b | 40a |

KEY

BRMRG BASIC QUIZ #2

10Oct79KC  
page 2/4

Matching

- A knot which may be used to form a loop in the middle of the rope which will not slip when stressed from both ends.  b
- The basic knot used for forming a loop at the end of a rope.  a
- Used for backing up other knots.  d
- May be used to tie a loop at the end of a rope. May be used to tie a loop in the middle of a rope, if the ends are not to be loaded colinearly (in line).  c
  - bowline knot
  - butterfly knot
  - figure 8 loop knot
  - overhand knot
- Used for tying in to the end of a rope directly to a climber's waist.  b
- Used for tying webbing loops; slips when wet somewhat, and jams tightly.  c
- Used for tying rope loops; jams tightly, and is very secure and strong.  a
- Used for tying two ropes together; is secure, yet doesn't jam too tightly.  d
  - grapevine (double fisherman's, barrel) knot
  - bowline-on-a-coil
  - water knot (overhand bend, ring bend)
  - figure 8 bend
- Used as an ascendeur knot using a webbing loop.  b
- Used as an ascendeur knot using a small-diameter rope loop.  a
- Used to form an adjustable loop in the end of a rope for lines not bearing heavy loads.  d
- Used to fasten a loop sling around a tree or other anchor.  c
  - Prusik knot
  - Headden knot
  - girth hitch
  - taut-line hitch
- Used to put a hitch on a post; also used for forming rope stretchers.  b
- Used to tie two ropes together when they must be under stress as they are tied.  a
- Not used to back up knots; has a very few applications in mountain rescue.  c

(Matching continued)

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