1. In the 1800s, during most of man's history, mountains were regarded as places best to be avoided, where strange and beasts and dangers were lurking.

2. In the 1800s, more and more began to view the mountains as places of beauty, to be explored, and considered, and most important, to be climbed. Avoided.

3. With climbing attitude came formation of climbing clubs. Since these clubs were paid not by their tours but by guides on account by a client, that client became using roped to "assist" hesitant climbers up difficult pitches.

4. The idea evolved of "belaying" the rope around a tree or rock should a fellow climber fall. Unfortunately, this theory showed working out in practice only in snow climbing, where climbers may stop themselves (and others on the rope) with an ice ax. Self-assist, and is practiced by some European climbers and guides.

5. Belaying has evolved into a system whereby one climber is stationary while the other climbs. The stationary person, or belayer, takes up or pulls out rope, so that a minimum of rope is between the climber and climber should the climber fall.

6. In the early days of climbing, a technique known as "assisting" or "rope-ding" evolved, where the climber anchored a rope and slid down the rope, with it wrapped around his body to prevent friction. Called "reefing" by Americans, this usually the middle of the rope would be put around an anchor, so the rope could
BE PULLED DOWN ALONG THE ARCOIL (A "PULL-DOWN"
ARCOIL). THIS TECHNIQUE HAS BEEN ADOPTED BY AMERICAN
CLIMBERS WHO MAKE EXTENSIVE USE OF MECHANICAL
DEVICES AND CALL THIS TECHNIQUE "ARCOILING."

7. In about Dr. Yorl Wilhelm Prusik of
invented (or rather popularized) A KNOT WHICH HAD
AN INTRIGUING QUALITY - IT COULD HOLD WHEN TIED
ONTO A STANDING ROPE. IT WOULD HOLD WHEN WEIGHT
WAS SUSPENDED FROM IT, BUT COULD BE EASILY BE NIPED
WHEN WEIGHT WAS REMOVED. Thus WITH TWO OF
THOSE KNOTS, IT WAS POSSIBLE TO ASSEMBLE DIRECTLY
UP A FIXED LINE WITHOUT NECESSARY RESIDENCE ON MUSK
SMITHWORK. This became known as "ASCENDING," OR
MOTOR CUSTOM "PRUSIKING."

8. Thus there now arose new techniques - BRIDLING,
RAPPELLING, AND ASCENDING. In recent years, climbers in
particular have advanced the art of rappelling and ascending,
ON "SINGLE ROPE TECHNIQUES," TO A VERY SOPHISTICATED POINT. Originally, climbers used
cable ladders, which are still in use for special
circumstances. Single rope techniques have achieved
the weight and bulk of carabiners. Giving equipment to
be minimized, and speed, efficiency, and safety to
be much improved.

9. AS A BASIC MEMBER OF THE BRMRC, YOU WILL
BE EXPECTED TO BE ABLE TO BRIDLE, RAPPEL PROPERLY
WON SLOWLY, ONCE LAID, AND
TO ASCEND WITH A VERY BASIL ASCENSION RIG.
IT IS IMPORTANT THAT YOU
PERFORM THESE TECHNIQUES, AS YOU MAY BE
CALLED UPON TO PERFORM THEM WITHOUT DELAY.
WHICH MAY BE Tiplina Conditions OF WEATHER,
FATIGUE, OR OTHER STRESSES.
B. RISKS AND SAFETY

1. Some people will put themselves in positions of danger that others would refuse to enter. The 'level of risk' one is willing to endure is the result of personal decisions, and it is my opinion that we should have criticism for the choice of an acceptable level of risk. Criticism for over or under-estimation of danger is quite appropriate, however.

2. In the mountain rescue business, certain risks that we would tolerate as individuals are not acceptable. Why? I think this answers the question by the two saying 'A deed resembles what it did another act upon'. To go further, consider the problem of an insurance rescue -- he on the is in effect signing up an employ of other rescuers,1964-65 Parties that are supposed to be dedicated to the victim on a completely different level. It would be sad parties to look out of one own window for a risk.

3. Because the risks a mountain rescue must face must be minimized, and because rescuers from which must avoid dangers in conditions such always would 'ball out', safety rules are a most important part of mountain rescue. General safety rules include:

a. Do things in a neat, orderly, calm way.

b. Use safety equipment such as helmets and
   leathers gloves when appropriate.

c. When performing any technical vertical technique, make
   a formal double check every time. Now is not time to build good habits for a
   hypothermia - weather rescue.

d. Whenever possible, get another person
   to check your closing, unless clean in inappropriate
4. A final comment about safety: Sometimes a combination of dangers may make it safer to avoid safety rules. An example would be downclimbing a mountain quicker than is safe, in order to avoid an electrical storm. This type of exception to the rules is known to exist, especially in mountain climbing, but still does not invalidate the general truth of safety rules. It tends to minimize the importance and deterrent to deviations when true exceptions is usually appropriate.

C. Ropes, Hardware, Personal Equipment

1. Rope and Webbing
   a. Materials (See Table 2-1)
   b. Construction (See Table 2-2)

2. Care of (Nylon) Rope in the Field
   a. To cut nylon rope or webbing, the point...a mark, the ends should be flared with a file.
   b. Ends of rope or webbing may be wrapped with color core tape (usually made from Surlyn vinyl tape). A slight amount of heat and some friction pressure will mold the tape to the nylon and the tape will last longer. If marking the middle of a rope, use core tape or an ink recommendation by the manufacturer. Other inks may severely weaken the rope.

C. Ropes are usually stored in a coil for neatness. However, if a rope is used directly from a coil, tangles will result. The coil should be untied, then the ropes should be stacked. This means placing the rope in a coil.
Random pile on the ground. A random stack will pay out easily from top on motion.

1. Collide

2. Whom bucket started finished with a rope, it should always be colored. It may be colored around inside and outside (or both insides and knotted for a smaller coil) or around the knots sitting tail-on-fashion. As a rope is colored, it is always inspected visually and by hand for bumps, nicks, or abrasion. The coil is tied off as shown:

   It is important to have enough wraps and to have them quite tight.

3. Rescue coil

   a. It is possible to coil a rope using the end of a D-ring (Army) structure, then to tie off around the center. This is a modified type of safety coil, called a rescue coil in the Civil Air Patrol. It is one of the few coils that will pay out nearly without stacking.

5. It is also possible to chain coil rope or webbing by forming a grain which in the center, pushing a loop of webbing through, pushing a loop or double webbing through the new loop, etc. until the loop is finished, when the two ends are pulled till the chain collapses.

9. It is possible to chain coil webbing or rope. A chain coil is very easy to undo, and is often used to shorten slings on a rack of equipment.

9. Cast up

9. When casting a rope, the end should first be tied off. The rope stacked, and moved 30 feet of the rope may be good coil in a hump, then throw
overhand. The call "Rope!" should sound twice
before casting the thing in. Of course, rope
must be thrown that the person casting the
rope does not accompany the rope down
with the rope. When the rope must be thrown down through
a narrow window, the middle part be throw
down first, then a "monkey's fist" may
be made (a circle bight of rope at the end)

If the rope is going over a
sharp edge, a
rope pad should
be used.

1. Ropes are strong, but DELICATE. EASILY
DAMAGE. DIRT INSIDE THE ROPE MAY ABRACE FIBERS. BY TWISTING
AND PULLING ON THE ROPE, AND ESPECIALLY BY PEOPLE
standing on the rope, standing on the rope
causing the rope to stretch by cutting it off.
A SHARP ROCK UNDERNEATH, DO
DON'T STAND ON THE ROPE!
(Especially with firearms on)
A ROPE MAY BE DAMAGED BY ROCK FALL WITHOUT
CUTTING THE FIBER. OFTEN THIS WILL BE MERELY
AS A "BUCKET" WHEN BENDING THE ROPE; BUT WILL NOT
BE APPARENT TO VISUAL INSPECTION. THIS IS A GOOD
ABNORMAL FOR THE USE OF LAO ROPE.
Although gas and oil do not directly damage a
rope, they may attract and corrode dirt, which 
OUT CORROSION
DAMAGE. ACIDS AND SOME ORGANIC SOLVENTS CAUSE
DAMAGE A NYLON WITH JUST MINIMAL EXPOSURE; TANEO, OR
BATTERY ACID IN A ROPE TENSION IS A NONMUL ROPE KILLER.
Ropes should be in a ROPE BAG WHEN IN A TRUCK,
AND HUNG UP IN A COOL, DRY PLACE AT HOME.
Although sunlight can damage rope, it is usually
only significant over long periods. The BEST IN A
CAR TRUNK OR BACK UV PROOF OR A HOT CAR
NOT EASILY DAMAGES ROPE (is SUSCEPTIBLE TO
CAUSE DAMAGE)

Ropes can and should be washed when
NECESSARY. They may not clean with cold. Please
in a HOT WATER TO PREVENT TOWELING) ROLLED WASHED WITH A MILD DETERGENT
WITH A SPECIAL ROPE TOWEL. ROPE OR BE AD
AND then DRIED IN A DRIER. A WET ROPE SHOULD NOT
BE USED TO IMPERFECT ROPE.
Rope and webbing should be renewed and replaced with necessary. This is determined by use of the rope and its apparent condition. Some types of damage are apparent to visual oil stains inspection, but some types, such as Degrade loss of energy absorption due to internal stress, may not. Loading of use is required to maintain this type of damage. Retiring them may be matched with black tape. Do not use black as part of a color code.

3. **Component**

a. **Magnet**

Most modern components are made of high-strength aluminum; it is strong and light, but weaken easily. Steel components are rare. They develop lack of magnetic iron content strength.

b. **Bolts** are classified as G0 or G00 or G000.

Choose some cases with locking screw caps.

The gate has a pin which fits into a match in the main part of the biner. It is designed to serve local when stress is applied. The strength is easy closed, and if the gate is open, the strength is much less.

c. **Biners** are ranked in terms of major axis strength. It's and stronger than equal in general because less strain is placed on the gate. Minor axis strength is very low, as is overall lead strength.

d. Biners should be kept clean and dry; they should be rotated just like ropes and webbing. E.g., some biners used for purposes may be
DEPOT ARMOUR; BINS ON TOPS OF A CLINE MAY DEVELOP INSIDE GALLERIES. BINS MAY BE COVERED WITHOUT ANY OIL, BUT EXCESS OIL WILL AFFECT CEMENT.

A. SAFETY HARNESSES

1. A suspender on a coil may be used to

A bolt may tie off the end of a rope

IN MANY MINER'S SITUATIONS, A PERSON MAY NEED TO ATTACH THE HARNESSES TO A ROPE, LITTER, OR ANY SOMETHING SIMILAR. IT IS

CUSTOM TO TIE INTO THE END OF A ROPE

WITH A BOWLINE ON A COIL, BUT A RECENT

RESEARCH PROJECT HAVING THAT IT IS POSSIBLE TO

START CONSCIOUS SYSTEMS WHICH MAY

HANDEL IN SUCH A SYSTEM. OTHER THINGS

OF SAFETY HARNESSES ARE SAFER AND MORE

COMFORTABLE.

A. HARNESSES MAY BE FABRICATED FROM "TURNAR

WEBBING IN SEVERAL DESIGNS. SOME IMPORTANT

CONSIDERATIONS:

A. FIT: MANY TWO HARNESSES FAIL TO THE

ADJUSTMENT. WHEN WALKING, CAN SLIP UP TO

KNEES AND STUMBLE WITH REPULSION.

B. SAFETY HARNESSES ARE SUBJECT

TO SEVERE ABRASION. HARNESSES WITH

SEW MANY HARNESSES WILL FAIL TOTAL IF

CUT IN ONE PLACE.

C. COMFORT: LOOSE HARNESSES SHUFFLE, BIND, AND ARE UNCOMFORTABLE.