

## Appendix QQ

### BASIC KNOTS FOR CUB SCOUTS



#### Overhand Knot

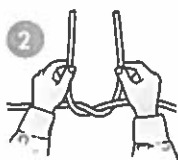
The simplest of all knots, the overhand knot has been in use for as long as there has been material that can be knotted. It also forms the basis of many other knots, particularly in the loop, bend, and hitch families. Once tied and put under strain, it is very difficult to untie.

1. Make a crossing loop turn by taking the working end of a rope behind the standing part.
2. Bring the working end to the front of the knot, then pass it through the crossing turn.
3. Pull on the working end and on the standing part to tighten the knot.

For more examples, reference these web pages: [www.animatedknots.com/overhand/](http://www.animatedknots.com/overhand/) and [www.wikihow.com/Tie-an-Overhand-Knot/](http://www.wikihow.com/Tie-an-Overhand-Knot/).



Square knot



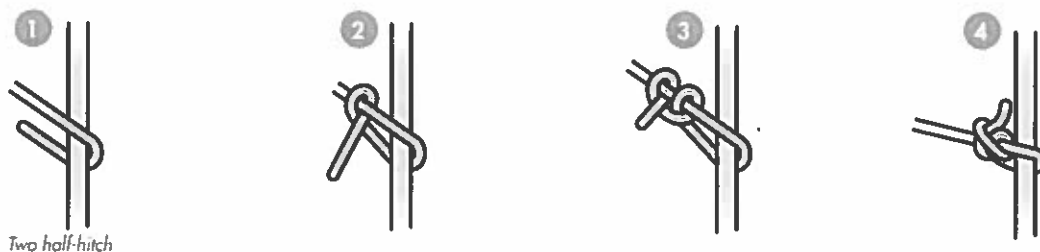
#### Square Knot

The square knot has many uses, from securing bandages and packages to joining two ropes together. A square knot works best when the ropes are of the same diameter and pressed against something else. This knot should not be used to hold a heavy load.

Tying a square knot is as easy as right over left, left over right. Here's how:

1. Hold a rope end in each hand.
2. Pass the right end over and under the rope in your left hand.
3. Pass the rope end that is now in your left hand over and under the one in your right.
4. Tighten the knot by pulling both running ends at the same time.

For more examples, reference the following web pages: [www.animatedknots.com/reef/](http://www.animatedknots.com/reef/) and [www.wikihow.com/Tie-a-Square-Knot/](http://www.wikihow.com/Tie-a-Square-Knot/)



Two half-hitch

### Two Half-Hitches

Two half-hitches can be described as a clove hitch tied around its own standing part instead of a pole, or another way as a taut-line hitch with an extra loop. However you describe it, two half-hitches (also called a double half-hitch) form a loop that can secure the rope to a post or grommet.

1. Pass the running end of the rope around the post or through the grommet.
2. Bring the end over and around the standing part of the rope, then back through the loop that has formed. This makes a half-hitch.



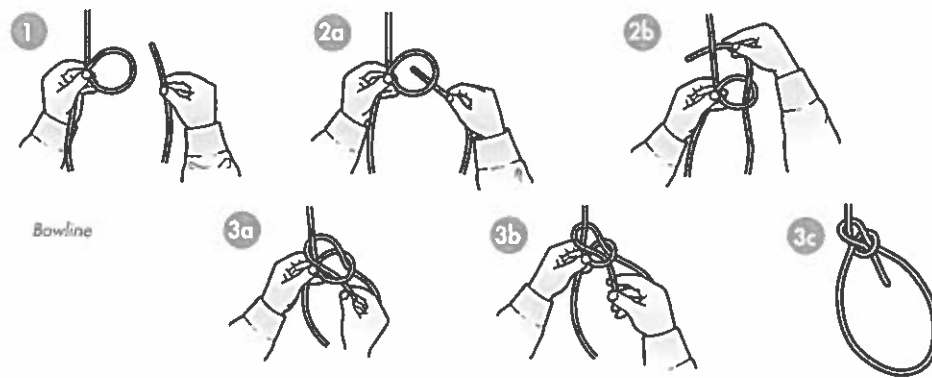
Taut-line hitch

### Taut-Line Hitch

Two half-hitches will tend to slide until the knot is cinched close to the post or grommet. To create an adjustable loop that stays in place, use the taut-line hitch.

1. Pass the running end of the rope around the tent stake.
2. Bring the end over and around the standing part, then back through the loop that has formed. Go around the standing part inside the loop again (this time closer to the tent stake).
3. Going in the same direction, take the end around the standing part outside to tie another half-hitch.
4. Work any slack out of the knot.
5. Slide the hitch to tighten or loosen the line.

For more examples, reference the following web pages: [www.animatedknots.com/midshipmans/](http://www.animatedknots.com/midshipmans/) and [www.wikihow.com/Tie-a-Taut-Line-Hitch/](http://www.wikihow.com/Tie-a-Taut-Line-Hitch/)



### Bowline

The bowline forms a loop that will not slip but is easy to untie. Learn to tie the bowline around yourself, around a post, and in the free end of a rope. With practice, you can even tie it with one hand.

1. Make a small overhand loop in the standing part of a rope.
2. Bring the rope end up through the loop, around and behind the standing part, and back down into the loop. The amount of rope remaining below the loop determines the size of the fixed loop in the finished bowline.
3. Bring the working end back down through the overhand loop so it exits the knot toward the inside of the fixed loop. Tighten the knot by pulling the standing part of the rope away from the loop while holding the bight.
4. To untie the bowline, turn the knot over. Notice the collar-shaped bight of the rope in the bowline. To untie the knot, push the collar away from the loop as if you were opening the top on a soda can. That will break the knot so that you can loosen it.

For more examples, reference the following web pages:

[www.animatedknots.com/bowline/](http://www.animatedknots.com/bowline/) and [www.wikihow.com/Tie-a-Bowline-Knot/](http://www.wikihow.com/Tie-a-Bowline-Knot/)

### Uses for the Basic Knots

**Overhand knot:** This knot is not very tight, nor large, but it still has uses. It serves as the initial portion of the knot used to tie shoes, packages, or any situation where a secure knot is needed that can be quickly and simply untied. Useful as a handhold as well as a stopper, it is tied at regular intervals along lifelines to prevent the rope from slipping through the hands or a hole or opening (like a rock climbing belay). It can also help prevent the end of a hanging rope from fraying.

**Square knot:** The square knot has many uses, from securing bandages and packages to joining two ropes together. A square knot works best when the ropes are the same diameter and pushed against something else. This knot should not be used to hold a heavy load.

**Two half-hitches:** Use two half-hitches to tie a rope around a post.

**Taut-line hitch:** This is the knot to use for staking out the guy lines of your tent or dining fly. It can be used to tighten or loosen a tent guy line by pushing the hitch up or down.

**Bowline knot:** Properly tied, a bowline never slips or jams. It holds permanent or adjustable loops and may be used to attach a cord to a pack frame, secure tarps and tents, or secure a line to a canoe. It's just what you want for tying a rope around your waist or around someone requiring rescue. A bowline also works well for securing guy lines through the grommets on a tent or dining fly. It is easy to untie.

## Fusing and Whipping Rope

### Fusing Rope

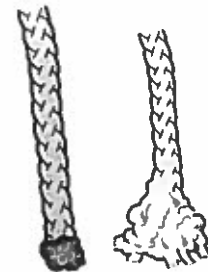
Rope is made by twisting together the stringy fibers of certain plants, or by twisting together or weaving strands of nylon, plastic, or other modern materials. Wear and tear sometimes causes a rope to unravel. For a temporary fix, tie a knot in each end or wrap it with duct tape. For a more permanent fix, whip or fuse the ends.

Fusing is a technique that you can use with rope and cord made of plastic or nylon. Plastic or nylon rope and cord melt when exposed to high heat. This method uses heat to melt (fuse) the fibers, forming a permanent bond that will prevent unraveling.

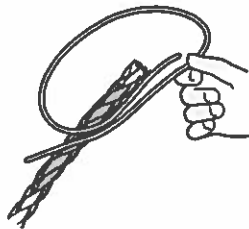
1. Cut off the frayed part of the rope. (With rope that comes untwisted very easily, it's helpful to wrap the ends with electrical tape before cutting.)
2. Working in a well-ventilated area, hold the rope end a few inches above a lighted match or candle to fuse the strands together.

Do not touch a newly fused rope end until it has cooled—melted rope will be hot and sticky. Remember to fuse both ends of the rope.

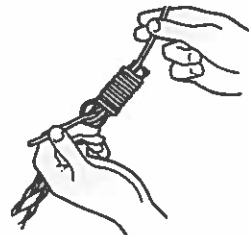
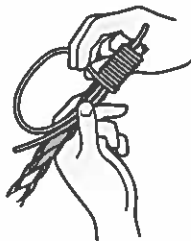
Do not try to fuse ropes made of manila, sisal, hemp, cotton, or other natural fibers, because they will burn rather than melt.



*Fusing a rope*



*Whipping*



### Whipping Rope

1. To whip the end of a rope or cord, use your pocketknife to cut away any of the rope that has already unraveled.
2. Next, using a 2-foot piece of strong rope or cord, preferably waxed, form a loop and lay it along one end of the rope or cord.
3. Tightly wrap, or whip, the cord around the rope, working your way toward the loop formed in the cord.
4. When the whipping is at least as wide as the rope is thick, tuck the end of the cord through the loop, then pull hard on the free ends to tighten the cord and secure the wrapping.
5. Unlay the end of the rope that sticks out so the whipping won't pull off.
6. Trim away the extra cord, then whip the rope's other end.