The IATSE Local 26
Education and Safety Committee
Presents:

KNOTS

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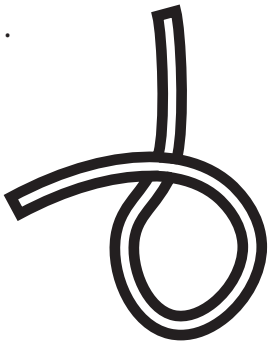
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Overhand Knot on Working End

1.



Step 1: Make an overhand loop by taking the working end over the standing part.

2.



Step 2: Bring the working end through the rear of the loop to the front.

3.



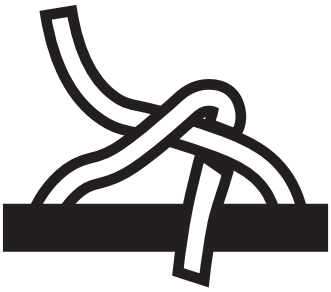
Step 3: Hold the Standing Part and pull the working end until the knot is tight.

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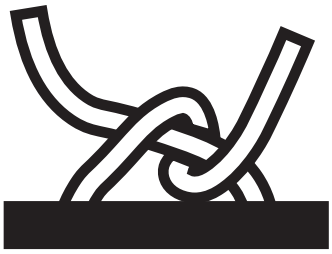
Shoelace Knot

1. 

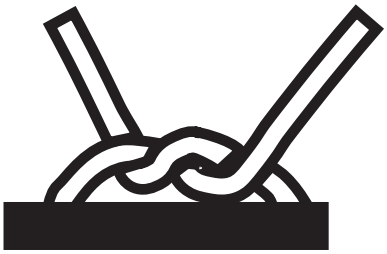
Step 1: Take one line upwards to the left. Take a second line upward to the right overhand of the first line.

2. 

Step 2: Take the second line downward underhand the first line.

3. 

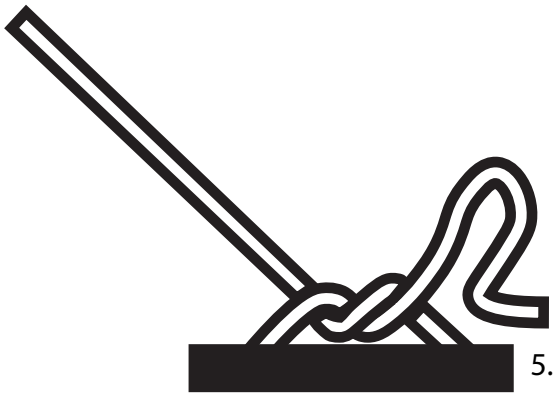
Step 3: Pull the working end of the second line forward under the first line and then upward.

4. 

Step 4: Pull both lines outward to tighten the knot. This is the beginning of a Shoelace knot.

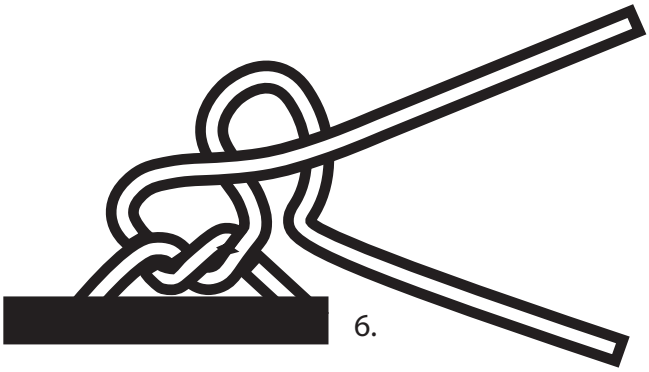
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Shoelace Knot



5.

Step 5: Create a bend on the line 2 (the line extending to the right).



6.

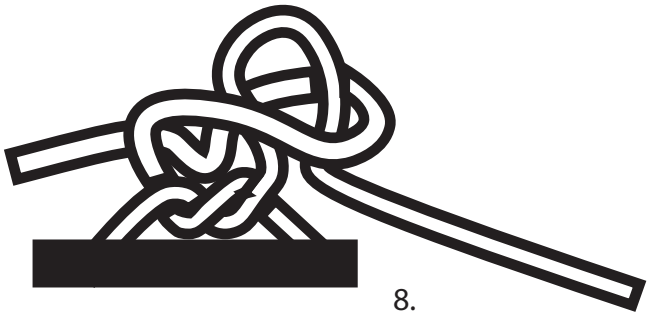
Step 6: Take Line 1 infront of the bend you created in Line 2.



7.

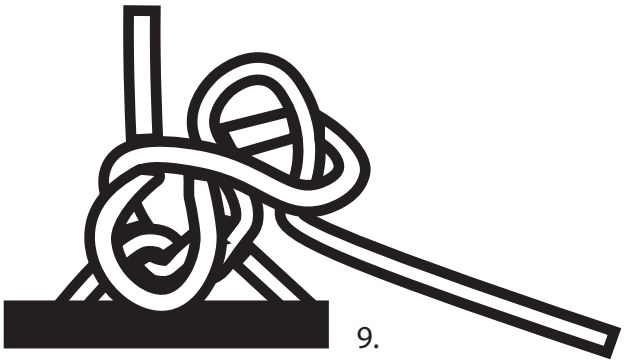
Step 7: Wrap Line 1 around the bend in Line 2 while leaving an opening next to the bend in Line 2.

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8.

Step 8: To the left of the bend in Line 2, pull the middle of the front section of Line 1 under the back section of Line 1.



9.

Step 9: Pull enough of of Line 1 forward and downward to form a bend.



10.

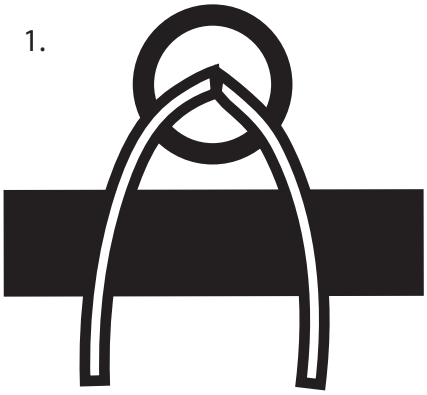
Step 10: Pull the bend in Line 1 to the left. Pull the bend in Line 2 to the right.

A successful shoelace knot should feel tight when either bend is pulled but should revert to an overhand knot when either of the lines' ends are pulled.

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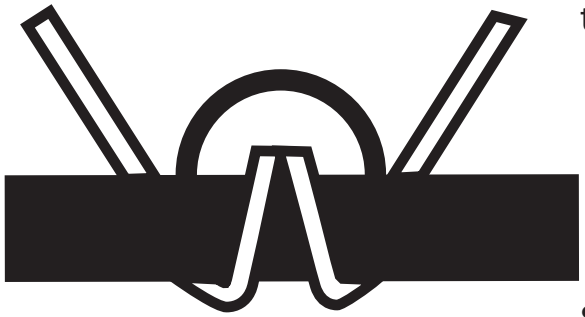
Opera Knot

1.



Step 1: Take the lines coming from the anchor overhand the top of the pipe.

2.



Step 2: Pull the ends of the lines upward behind the pipe. One line on either side of the lines coming from the anchor.

3.



Step 3: Start a Shoelace knot (make an overhand knot) in the lines so that the knot fits tightly between the anchor and the pipe.

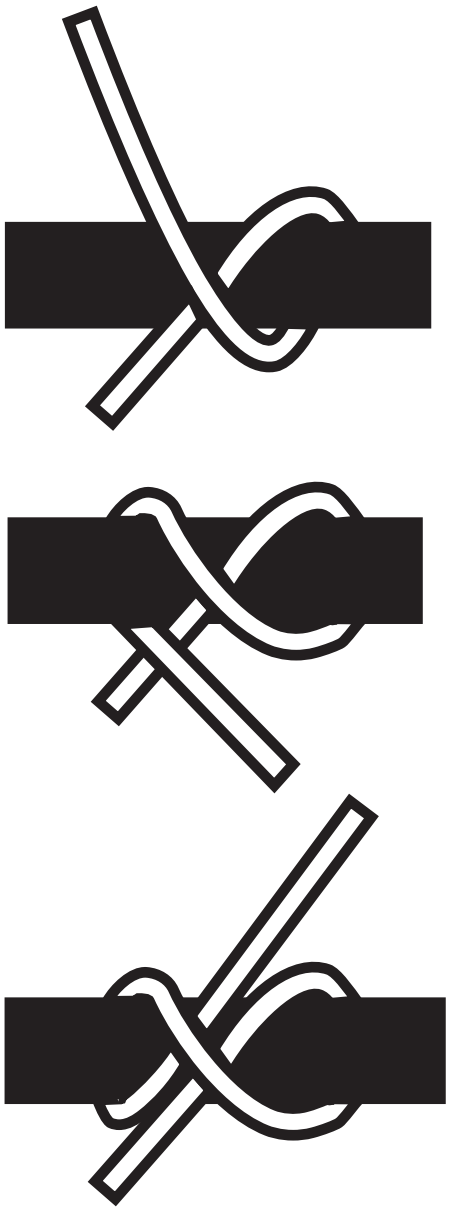
4.



Step 4: Finish the shoelace knot to hold everything in place.

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Clove on End



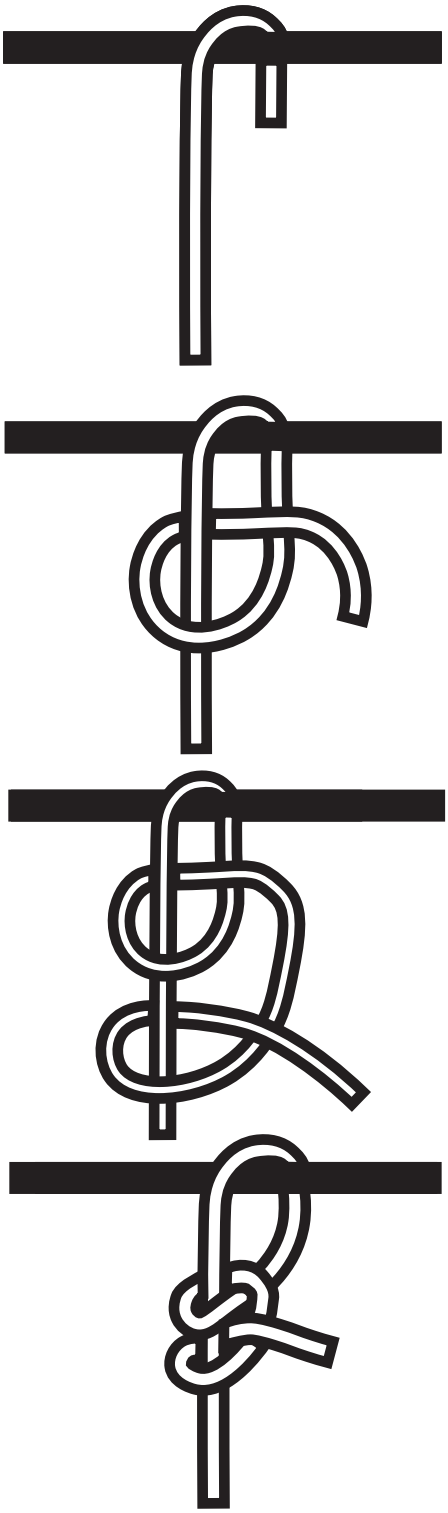
Step 1: Take the standing line over and around the top of the object.

Step 2: Cross over the standing line and around the object.

Step 3: Pass the tail under the bight of rope on the object on the same side of the standing part of the line as the second loop. Tighten by pulling the tail and the standing line in opposing directions.

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Two Half Hitches



Step 1: Place standing part of line over object. Bring tail under object.

Step 2: Cross tail over the standing line. Bring working end under standing line and through the loop you created.

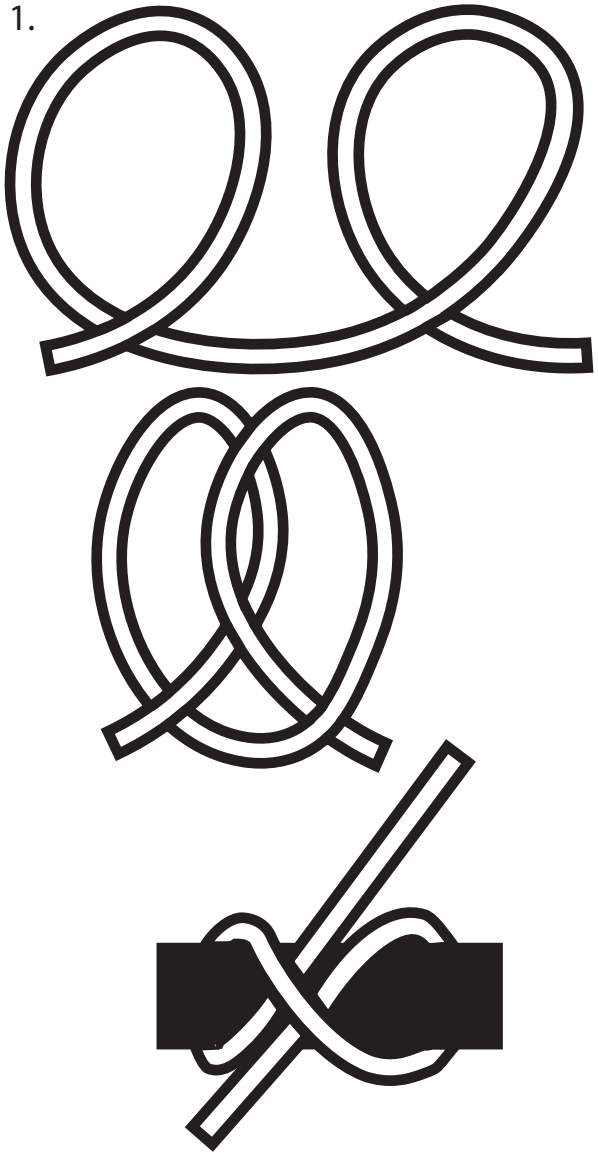
Step 3: Repeat Step 2.

Step 4: Pull tail and standing line to tighten knot.

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Clove on Bight

1.



2.

Step 1: Make an underhand loop

Step 2: Make a second underhand loop with the working end of the tail.

Step 3: Place the second loop over the first loop

Step 4: Place over the object. Tighten by pulling the tail and standing line in opposite directions.

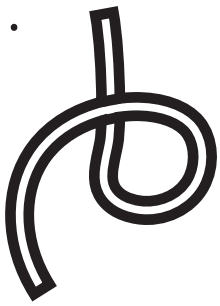


Optional. Step 5: To prevent slippage, add a half hitch.

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Bowline

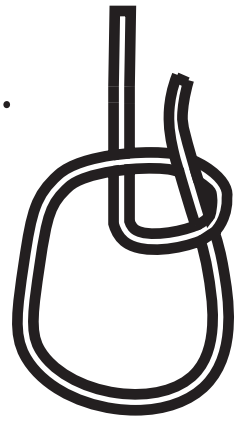
1.



Step 1:

While holding the standing part of the line in your left hand, form an overhand loop on the right side of the line.

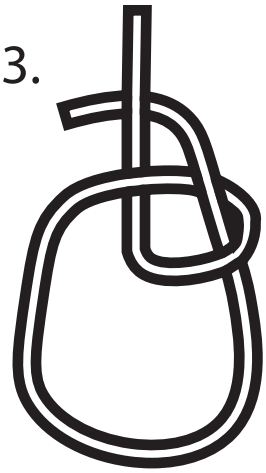
2.



Step 2:

Pass the working end up through the backside of the loop.

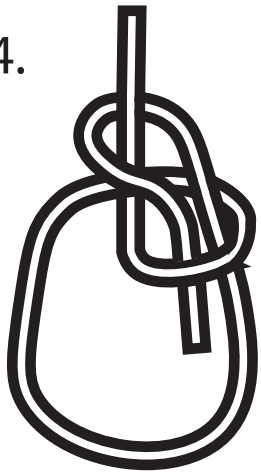
3.



Step 3:

Take the tail around the backside of the standing part.

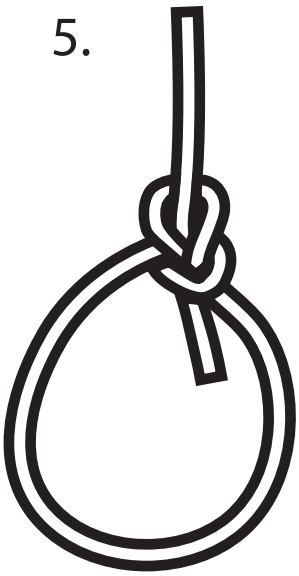
4.



Step 4:

Pass the tail down through the front of the loop.

5.



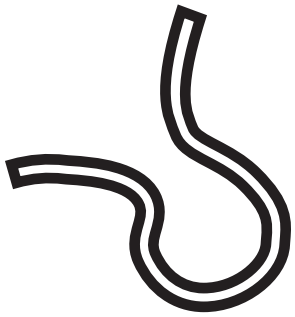
Step 5:

Tighten the knot by pulling down on the tail with your right hand and up on the standing part with your left hand.

******Be sure to have enough tail to safely hold a load.

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Trucker Hitch

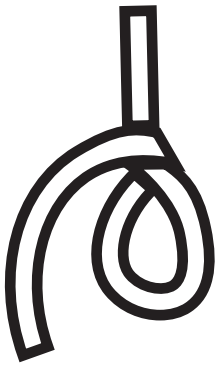


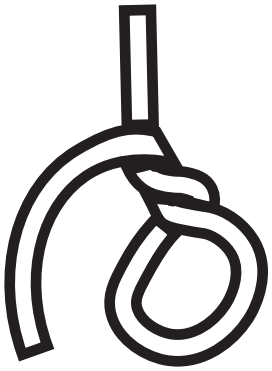
Step 1:

On the standing line create a bend in the line.

Step 2:

Twist the bottom of the bend to form a loop.



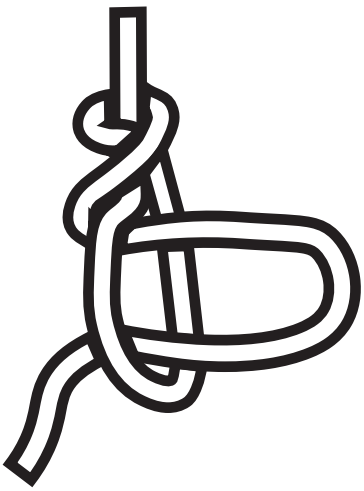


Step 3:

Twist again in the same direction.

Step 4:

Pull a bend on the working end through the loop you just created.

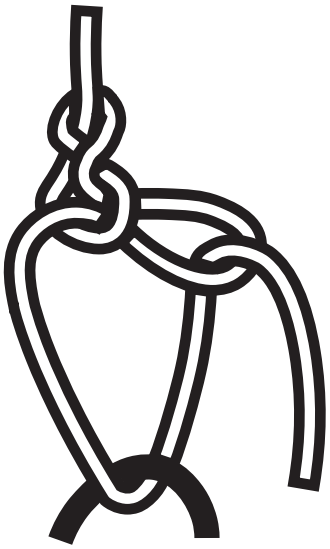


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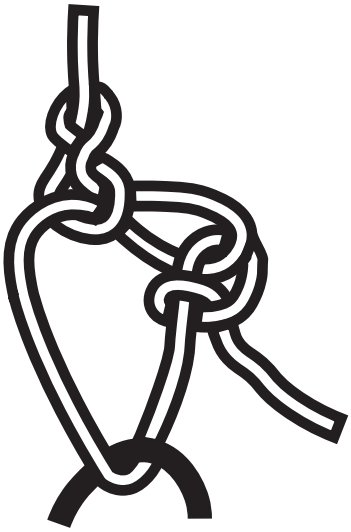
Trucker Hitch



Step 5: Take the working end around an object and through the bend.



Step 6: Take the working end downward, pull loop tight around the bend.



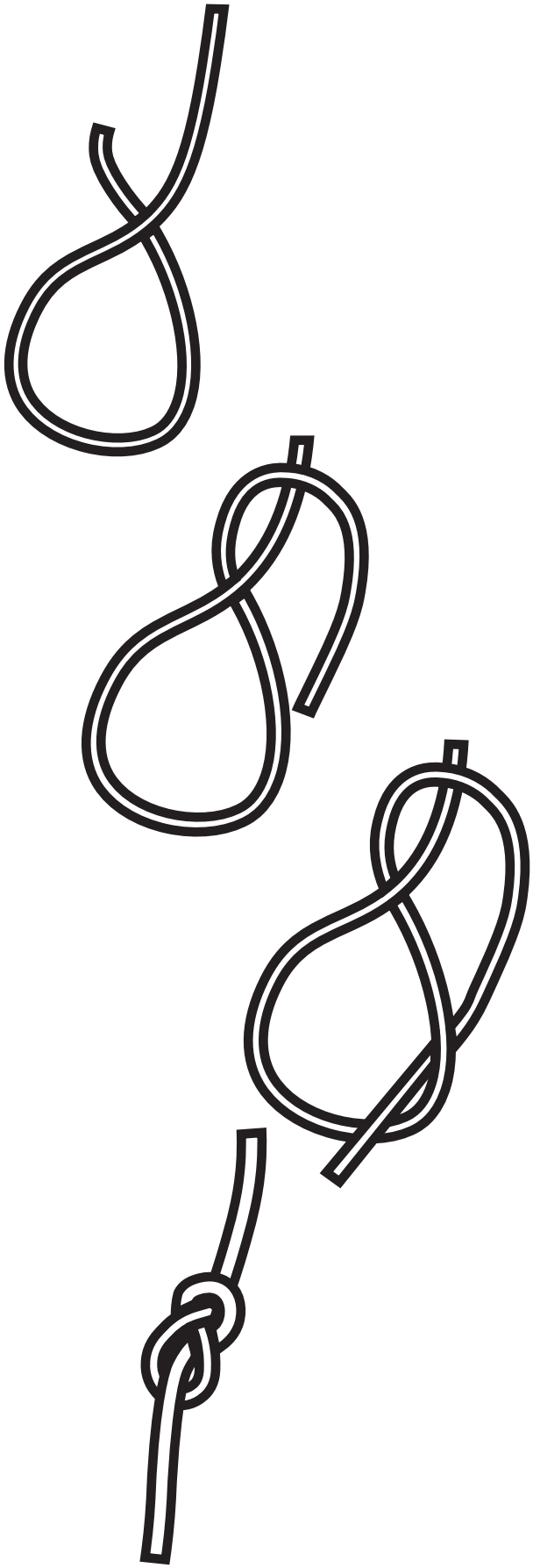
Step 7: While maintaining tension, make a half hitch on the line between the object and the bend.



Step 8: Make another half hitch that goes the same direction of the first on the line between the anchor and the bend.

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Figure Eight



Step 1: Form an underhand loop.

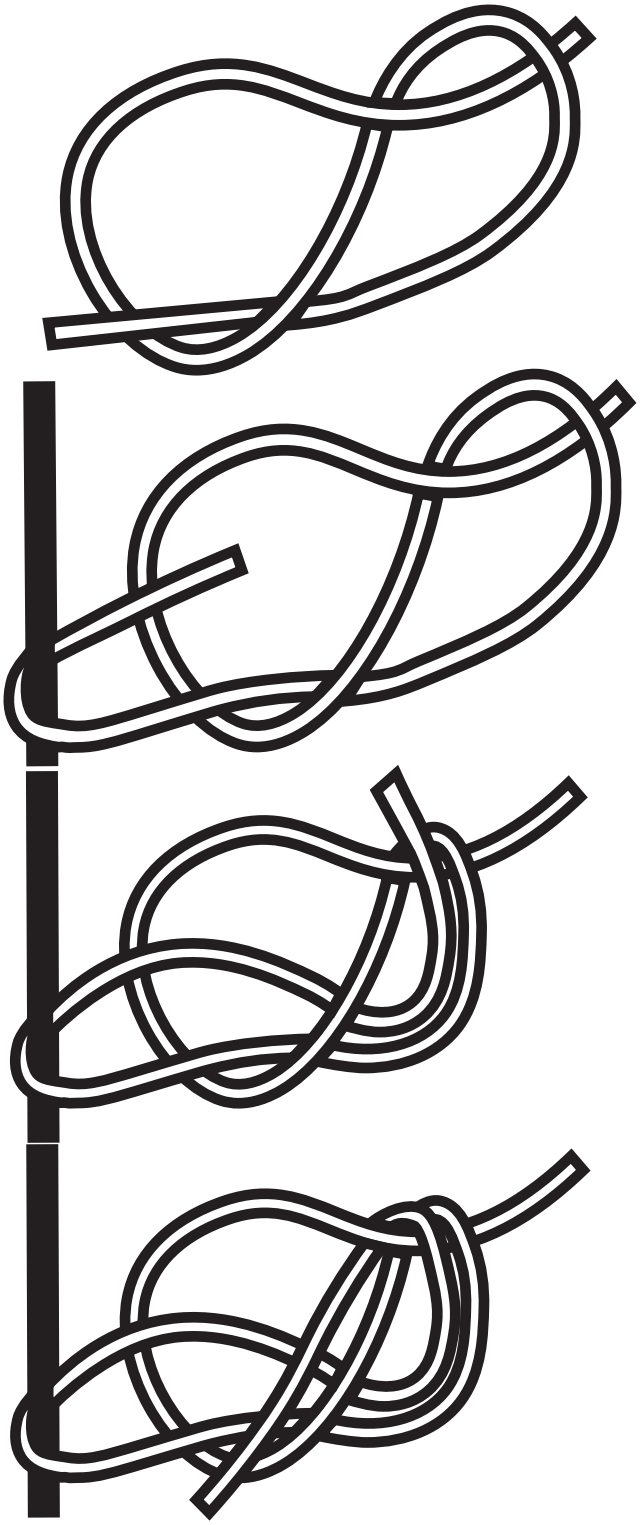
Step 2: Bring the working end overhand of the standing end.

Step 3: Bring the working end through the back of the loop forming the rough shape of a figure eight.

Step 4: Pull the standing and the working end in opposite directions to tighten the knot

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Figure Eight with Follow-through



Start with a loose figure eight. You will need the same amount of rope to do the follow through that you did for a figure eight.

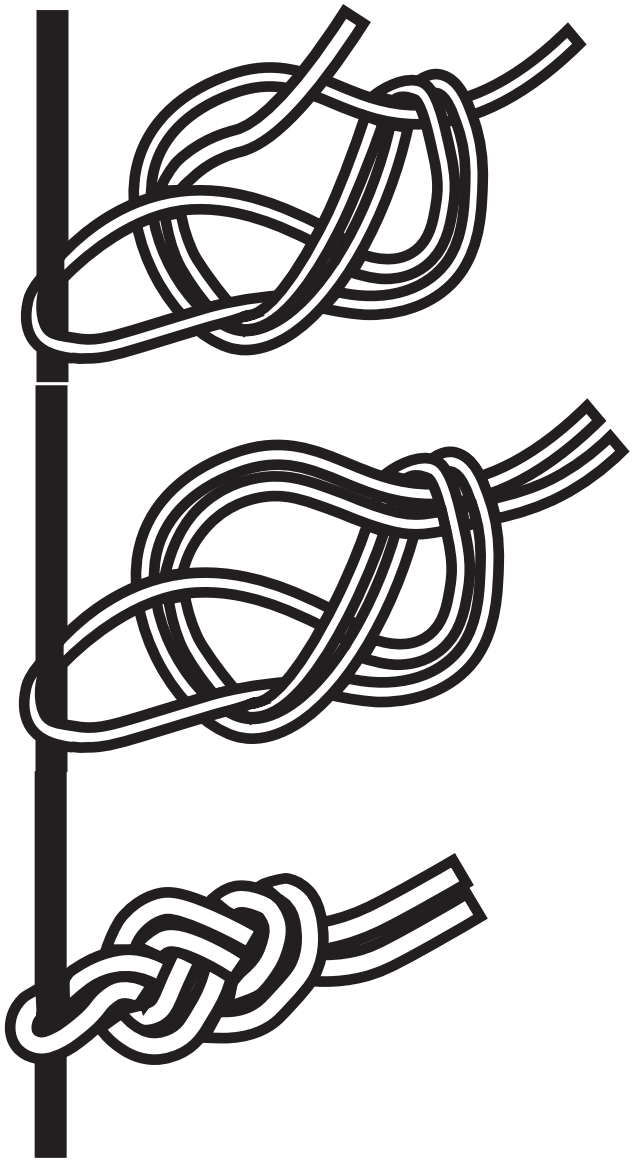
Step 1: Take the working end around an anchor.

Step 2: Reverse the path you took to make a figure eight. Take the working end through the bottom loop from left to right in front of the outer edge and behind the inner edge of the loop.

Step 3: Take the working end overhand the standing line then downward toward you so the working end is in front.

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Figure Eight with Follow-through



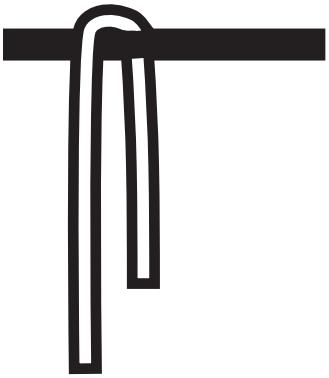
Step 4: Take the working line behind the bight around the anchor.

Step 5: Take the working end through the upper loop so that it runs along side the standing end.

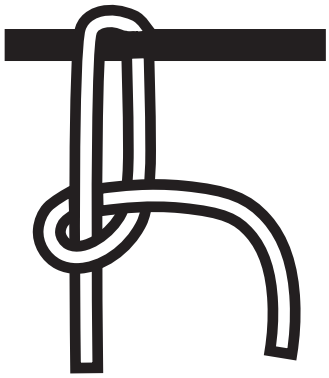
Step 6: Pull both the working and standing lines together against the anchor to tighten. To check that the knot is tied correctly count to ten by twos.

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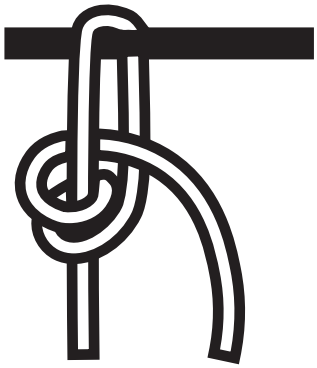
Taut Line Knot



Step 1: Take the working end over your anchor.

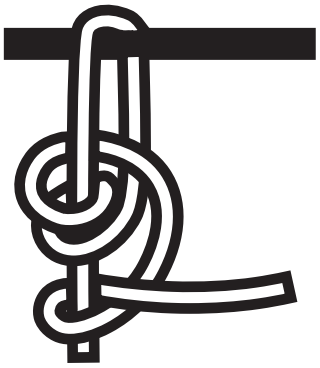


Step 2: Take the working end around the standing line in a wrap toward the anchor.

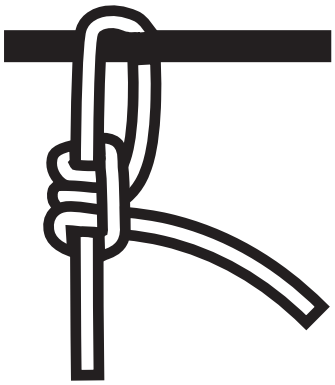


Step 3: Do another wrap of the working end around the standing line toward the anchor.

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Step 4: Make a half hitch with the working end below the two wraps by taking the working end below your two wraps and do another wrap around the standing end toward the anchor.



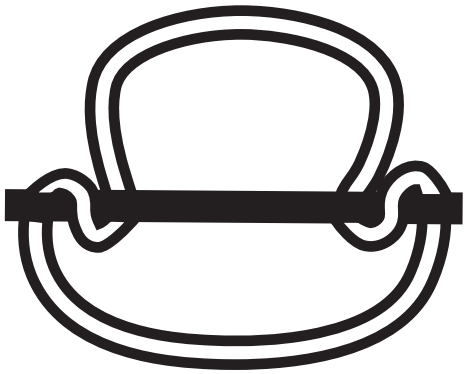
Step 5: Pull the knot tight. It should be snug but still allow slippage along the standing line.

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Prusik



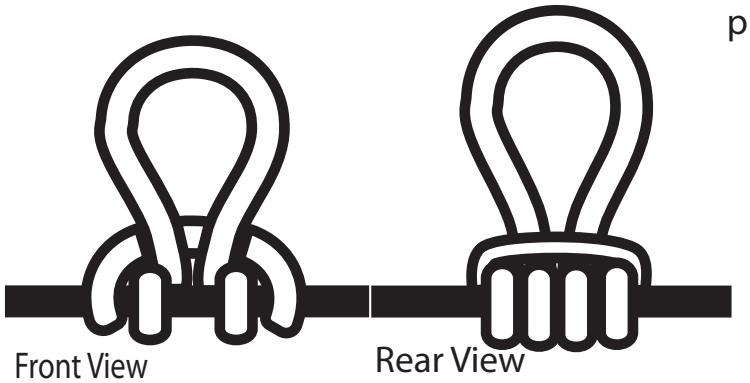
Step 1: Place a loop of rope or a round sling around a standing line.



Step 2: Make an inside wrap around the standing line.



Step 3: Using the same loop, make a second inside wrap around the standing line.



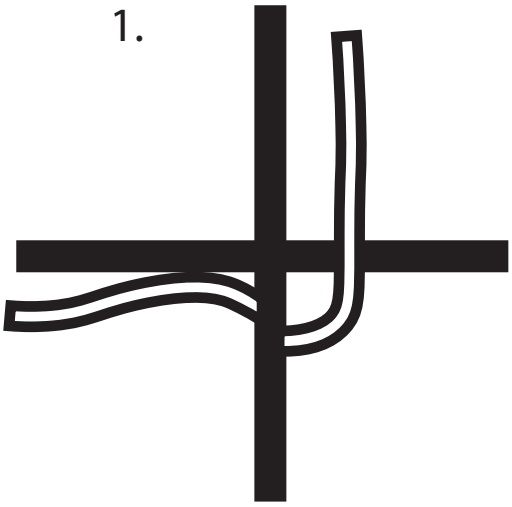
Step 4: Cinch loops together and pull on remaining loop to tighten.

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Belay on Pinrail

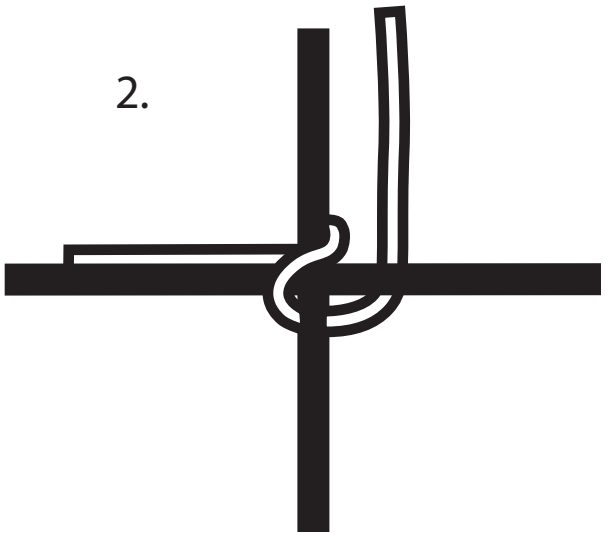
Step 1: While holding the Standing Line make a bend around the back of the bottom of the pin

1.



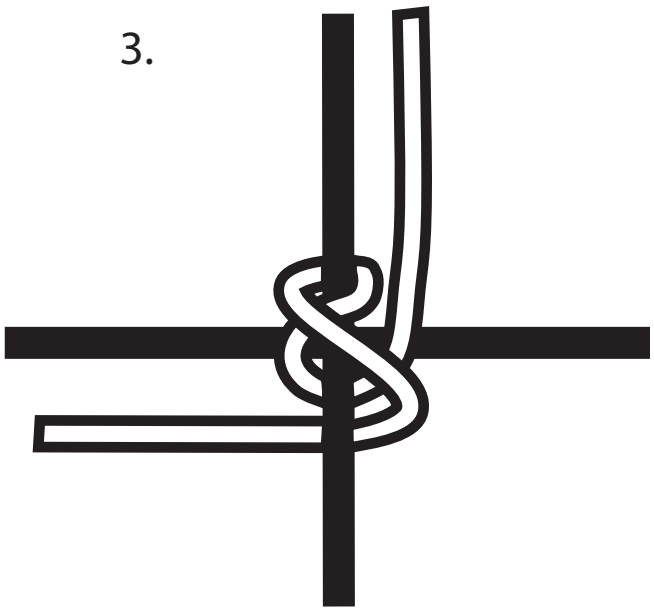
Step 2: Maintain tension on the line. Take the working line in an upward diagonal then bend it around the back of the top of the pin.

2.



Step 3:Take the working line downward diagonal and bend it around the back of the bottom of the pin.

3.

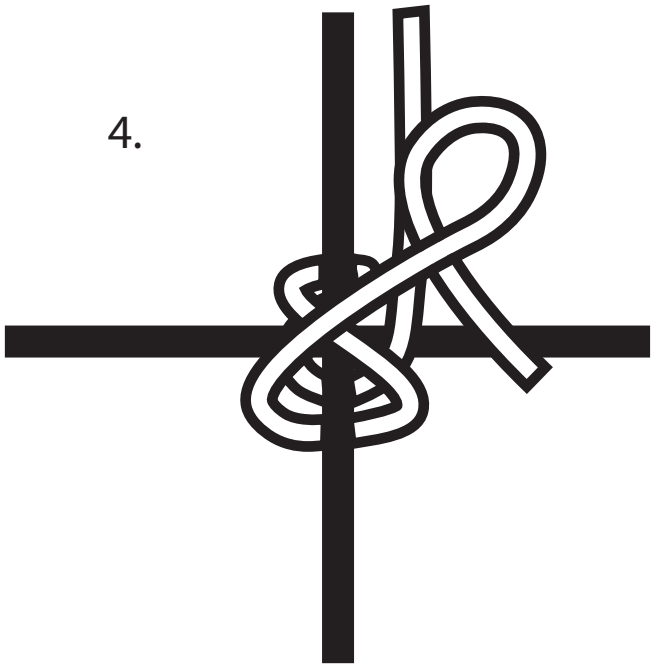


*****For heavy loads repeat Steps 2 and 3 together while leaving enough space on the top pin to complete Step 4.

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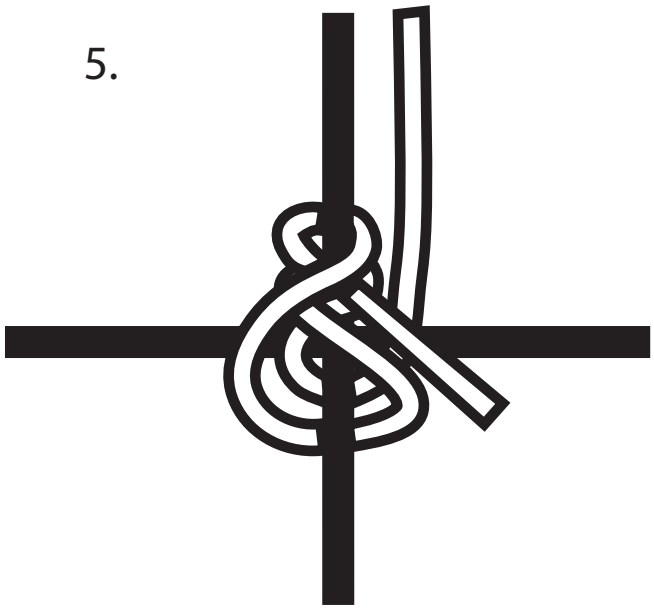
Step 4: Take the working line in an upward diagonal then form an underhand loop.

4.



Step 5: Take the loop over the top of the pin and cinch it tight. The line should hold tension on its own.

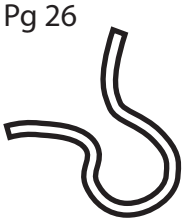
5.



***If you have excess rope, make a coil of it and place it over the top of the pin.

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Glossary



Bend



Twist



Double Twist forming interlocking elbows

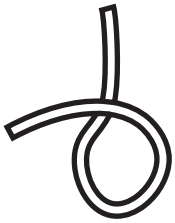


Wrap

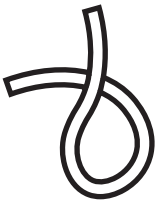


Standing End - part of the rope not being tied. Usually coming from the load or an anchor.

Working End - Part of the rope that gets tied



Overhand Loop
Working End crosses over the Standing End



Underhand Loop
Working End crosses under the Standing End

Glossary

Belay - to secure a rope with an S or Figure 8 turns around a belaying pin

Bight- A bight has two meanings in knotting.

1. the middle of the rope you are working with (between the standing end and the working end)

2. an arc in a rope that is at least as wide as a semicircle. In either case, a bight is a length of rope that does not cross itself. Knots that can be tied without use of the working end are called knots on the bight.

Dressing- Arranging the parts of the knot to optimize security and/or strength.

Hitch - knot that ties a rope to something else

Hope Knot - when you aren't sure it will hold but you really want it to stay

Slack - any loose or inactive part of the rope

Slippage - controlled movement of the rope lets you adjust position

Slip or Slipped Knot - any knot that unties when an end is pulled

Stopper Knot - any knot tied on the end of a rope to prevent it slipping out

Taut - Tight

Working End AKA Tail - end of the rope used to tie and form the knot

Suggested Reading:
Ashley Book of Knots available for free download at
https://archive.org/details/TheAshleyBookOfKnots