

FIT OA: Outdoor and Adventure Module 2 Worksheet 3

Activity 3: A KNOTTY PROBLEM

Direction: Analyze the scenario/situation carefully and determine the appropriate knot that you should use. Justify your answers. (60 points)

1. You have a rope with a damaged section in the middle and wish to avoid putting strain on the damaged section whilst still being able to 'pull' on the rope.

The ideal knot that should be used is the Sheepshank knot. The Sheepshank knot is specifically designed to prevent further strain or breakage in the damaged section or the middle part of the rope and protect it. Additionally, it can also be used to shorten the rope for further strengthening and make the rope still able to 'pull.' Thus, the Sheepshank knot is advised in this given situation.

2. You need to heave a line across a river. You decide to throw a light line first and pull across a heavier line. You wish to join a thin rope to a heavier, thicker rope.

In this particular situation, the Sheet Bend knot is the most advisable since it requires a joint of two different ropes in which the Sheet Bend excels and is designed for. Additionally, in crossing a river, more pressure is exerted from the river's current, and the individual's body weight, the tension in the rope increases. Despite that Sheet Bend excels in tremendous pressure, the more strain occurs, the greater the strength, the harder it is for the knot to be untied; therefore, it is advisable.

3. You need to drag a large log going to your camp.

In dragging or attaching a rope to pull an object, an advisable knot is Timber Hitch. Given in its name, Timber Hitch is a type of knot specified to tie a bundle of logs or to a pole. This type of knot is advisable since the more pressure or tension occurs, the harder it is to untie. Timber Hitch knot is also effortless to undo, making the work in the camp easier and productive.

4. You want to attach a smaller line to a large diameter rope. The line will be under strain in one direction only and you don't want it to slip along the large rope.

For the line to be under strain in one direction only and don't want it to slip along the large rope, the [Tautline Hitch](#) knot is the most preferable. It is since this type of knot is specifically designed to excel in one direction strain. Additionally, [Tautline Hitch](#) knot's ability can also be attached to a specific object, whether it is an object or a large diameter rope from the situation. Thus, it is advisable to use [Tautline Hitch](#) in this situation.

5. You need to lower an injured friend down a 4 m wall with the help of your patrol. You need a good rescue knot to lower him safely and to keep him away from the wall.

In this given emergency type of situation, a considered great rescue knot can be applied, which is called [Fireman's Chair](#). This type of knot is typically used as an alternative to expensive or time-consuming rescue equipment. [Fireman's Chair](#) knot is also quick to tie and can handle a lot of strain; thus, it is very suitable for rescuing or lowering an injured friend from a certain height to prevent further casualties safely.

6. You want to attach a safety line to a carabiner and harness for use in climbing. You need a fixed loop that you can ensure it is tied correctly, even in poor light or poor weather.

From the given situation, to indeed attach a safety line to a carabiner and harness for climbing, the [Double Figure Eight](#) knot is the most preferable. This type of knot is considered a favorite of climbers due to its distinctive shape that can be checked in low light or poor weather. It is a trusty knot, especially for hikers, that are easily tied, secured, and very useful for climbing. Thus in the given situation, [Double Figure Eight](#) is the correct knot to be used.