Erection of Flagstaff

Why do we pitch a flagstaff?

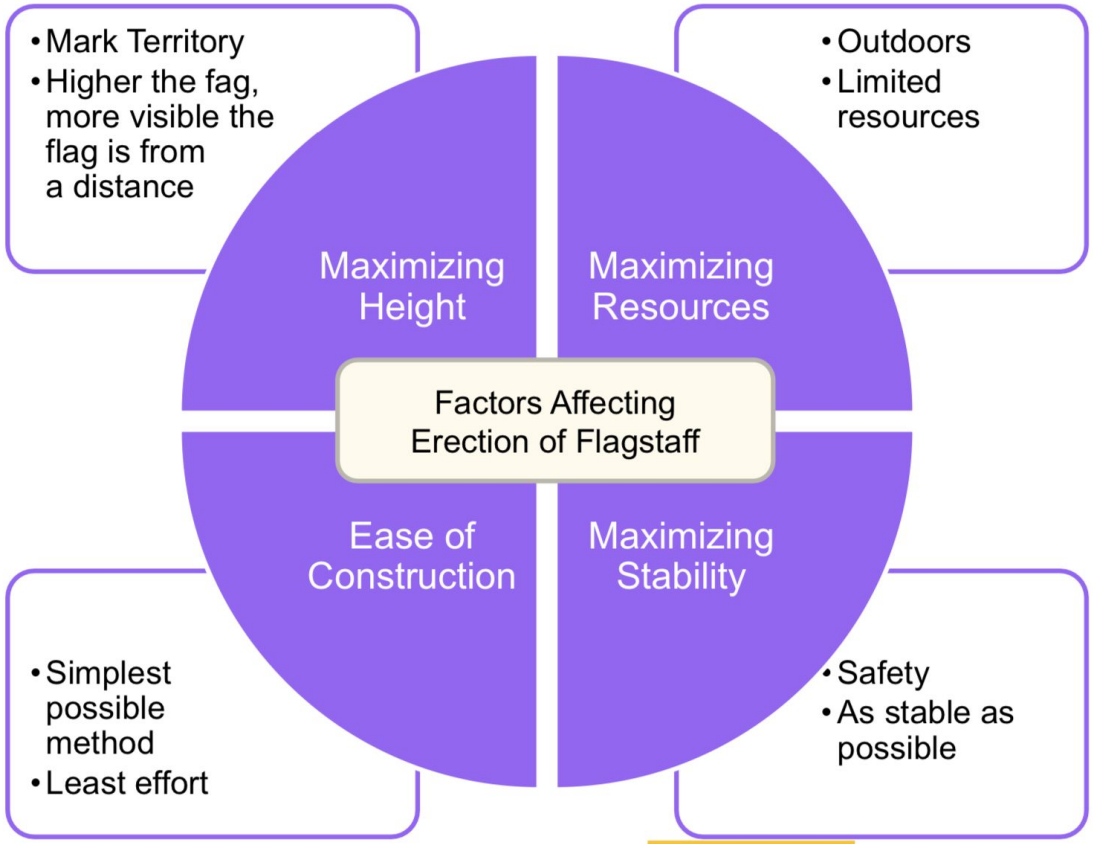
Purpose of a Flagstaff

- Marking territory
- Inculcate values
  - Symbolises identity (i.e. it is a practice to have a flag raised during camps (e.g. ASTC))
  - Teamwork
- Practical application of knots, lashings and pioneering knowledge

Factors Affecting Erection of Flagstaff

Factors

1) Maximising height
    a) The higher the flag, the more visible it is from a distance
2) Maximising resources
    a) While erecting flag from outdoors, we assume that there are limited resources at hand — must make use of the resources we have to its fullest potential
3) Maximising stability
    a) The end product should be as stable as possible to ensure the safety of those around it
4) Ease of construction
    a) Aim to construct the flagstaff in the simplest possible method requiring the least effort

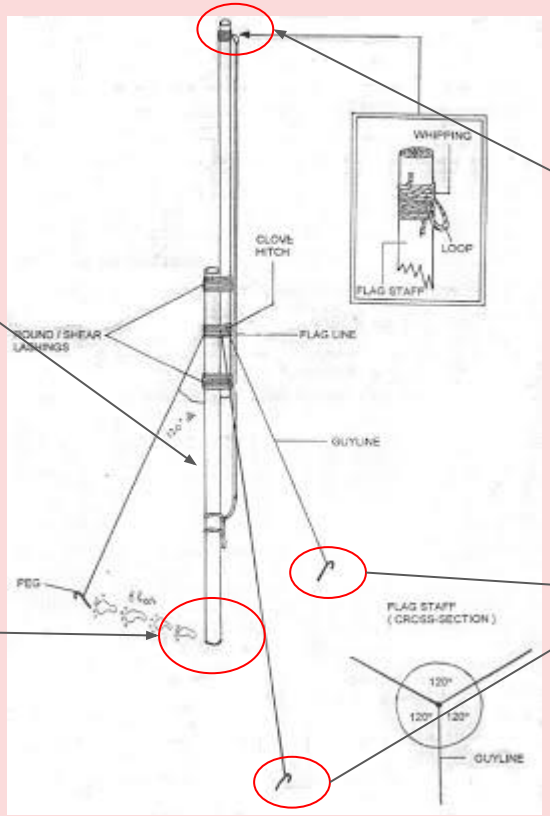

Factors Affecting Erection of Flagstaff
Maximizing Height
Maximizing Resources
Ease of Construction
Maximizing Stability
• Mark Territory
• Higher the fag, more visible the flag is from a distance
• Outdoors
• Limited resources
• Simplest possible method
• Least effort
• Safety
• As stable as possible

What Should an Ideal Flagstaff Look Like?

Ideal Flagstaff

The flagstaff should be straight such that it is perpendicular to the ground instead of slanting at a certain angle.

Flagstaff should be as stable as possible by maximising the base area of the flagstaff.



The flag should be raised to the maximum height of the flagstaff.

The direction and angle of the pegs should be accurate (45° from the ground with one palm's width away from the ground)

Important Safety Precautions to Take

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Before erecting the flagstaff

- The ground should be generally level
- Get a CI to check the integrity of your whole structure before erecting it

Erecting / Lowering flagstaff

- Alert anyone around the area about action being taken
- Be clear of surroundings
    - Clear area of people, trees, etc. when the flagstaff is erected / lowered

Important Safety Precautions to Take

Erecting / Lowering flagstaff

- Get someone to stand at the base of the flagstaff to support it when guy lines are untied
- When lowering the flagstaff, have someone anchor the base of the flagstaff into the ground, and another person ready to lower the flagstaff down
    - Flagstaff should not drop straight to the ground

Logistics Required

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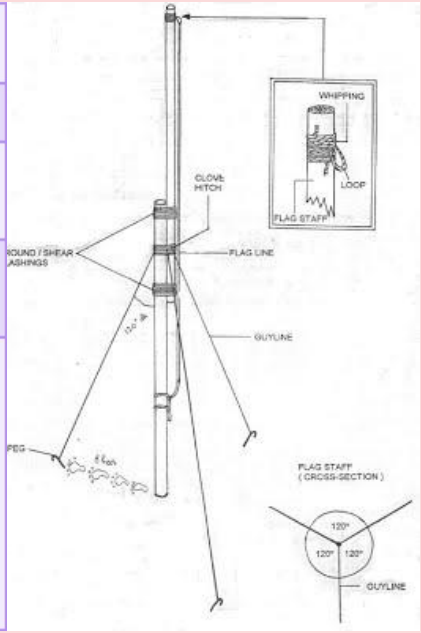
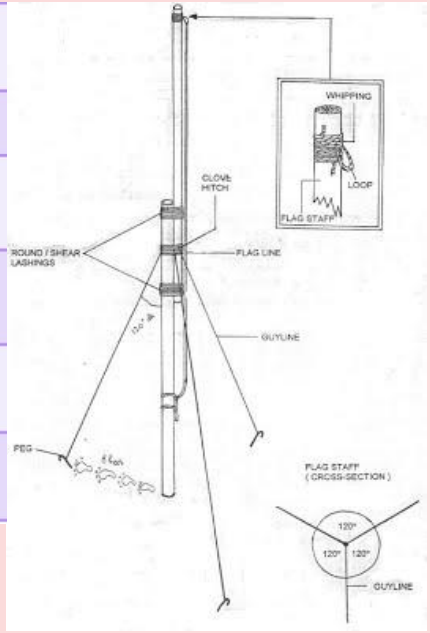
Equipment	Estimated Measurements	Quantity	Parts
Manila Hemp	3.0m	2	2 Round Lashings
	5.5m	3	3 Clove Hitches, which are pulled to form 3 guylines
Spars	3.0m each	2	Upper/Top Spar Lower/Bottom Spar
Bootlace/Twine	1.0m	1	To attach a pulley to the spar **OR** To form an improvised pulley - Manharness knot with West Country Whipping - Modified S-whipping - Modified W-whipping



Logistics Required

Equipment	Estimated Measurements	Quantity	Parts
Nylon Rope	10.0m	1	Flag Line / Halyard
Pegs	-	3	-
Mallet / Extra Peg	-	1	-
Flag	-	1	-
Pulley (Optional)	-	1	-



- 3 x 1.2m dowel poles
- Black circle cut-out

Hard Skills Required

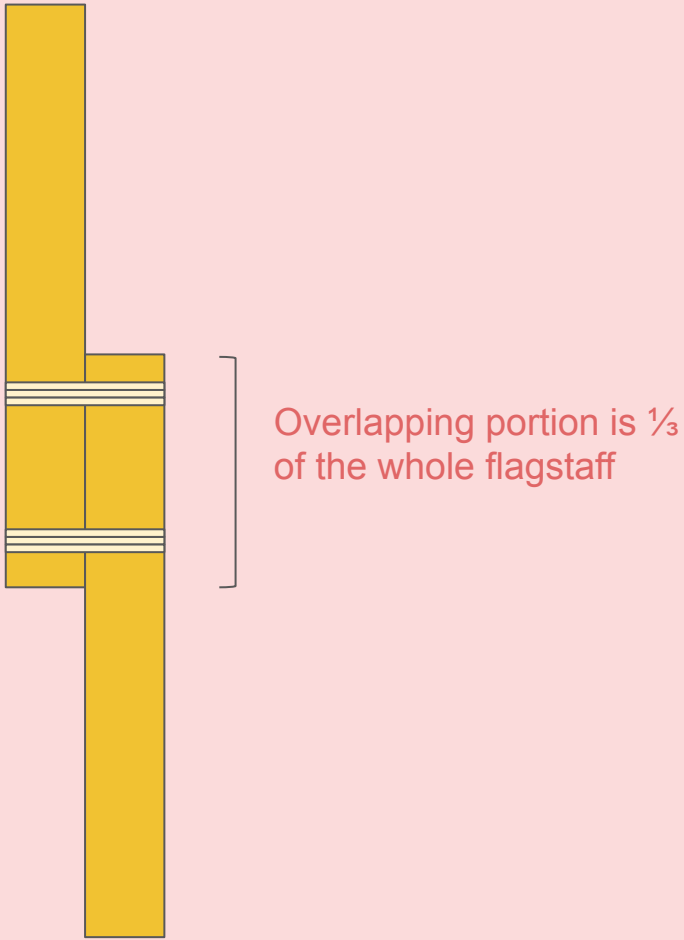
- Knots and Lashings
  - Manharness
  - Clove Hitch
  - Round lashing
  - Tent Guy Loop
- Knowing the commands and procedure when raising and lowering the flag

Recommended Procedure

Step 1

- Choose spars that are as even as possible, such that the 2 spars can be secured tightly together

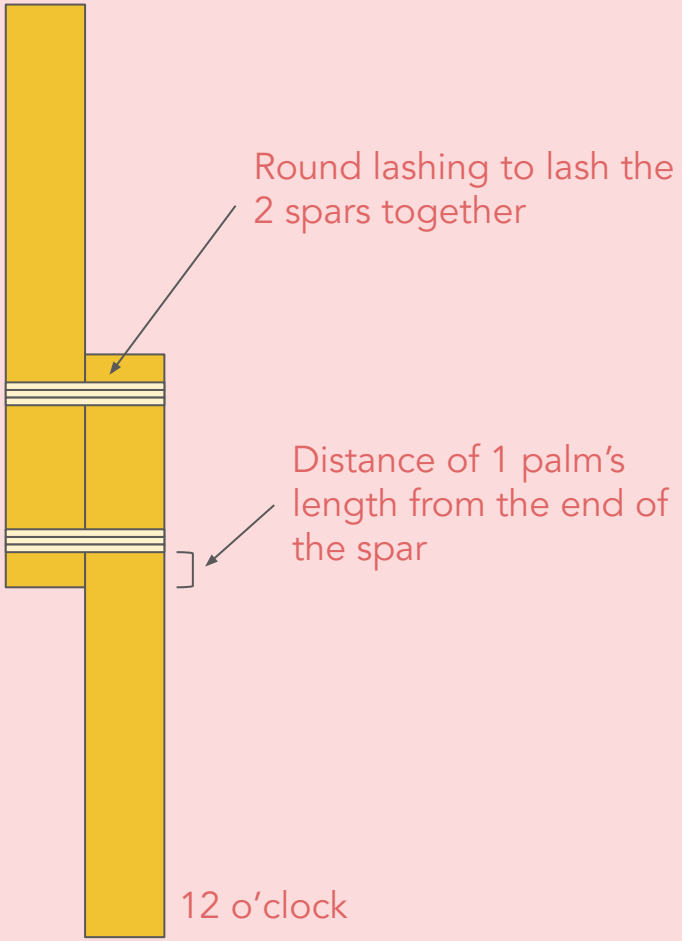
- The recommended length of the overlapping portion of the 2 spars is ⅓ to ⅕ of the whole flagstaff (which is equivalent to ½ to ⅓ of each spar if 2 spars are about the same length)



Step 1 (continued)

- Take note that the thicker, studier and heavier spar (with a larger base) will be at the bottom of the flagstaff and that would be facing the 12 o'clock

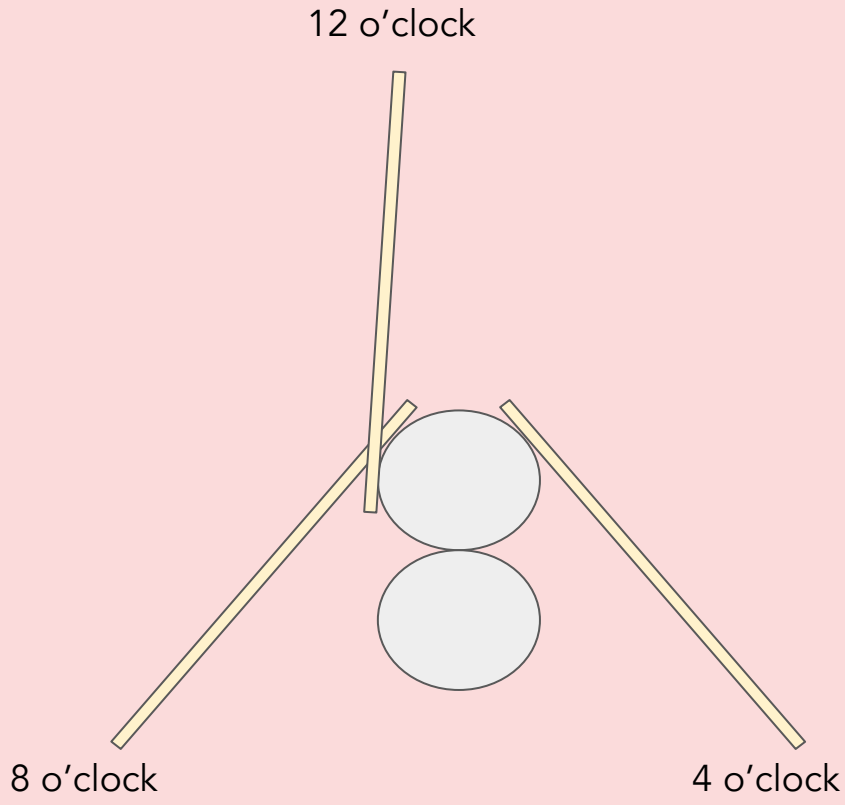
- Using 2 x 3.0m manila hemp, bind the 2 spars together with round lashings
    - The round lashings for the spars should be one palm before the end of the spar, and completely tightened



Step 2

- Using clove hitches, secure 3 x 5.5m manila hemps to the middle of the overlapping region between the 2 round lashings
- Clove hitches should be adjusted such that the standing ends are 120° to one another
    - Downward force nature (i.e. cutting up of clove hitches, where working end supports standing end) — when pulling guylines to secure flagstaff, standing end will exert downward force, thus the upwards cut helps t support the guylines
    - 1 clove hitch (8 o'clock) tied in opposite direction from the other 2 (12 o'clock and 4 o'clock)

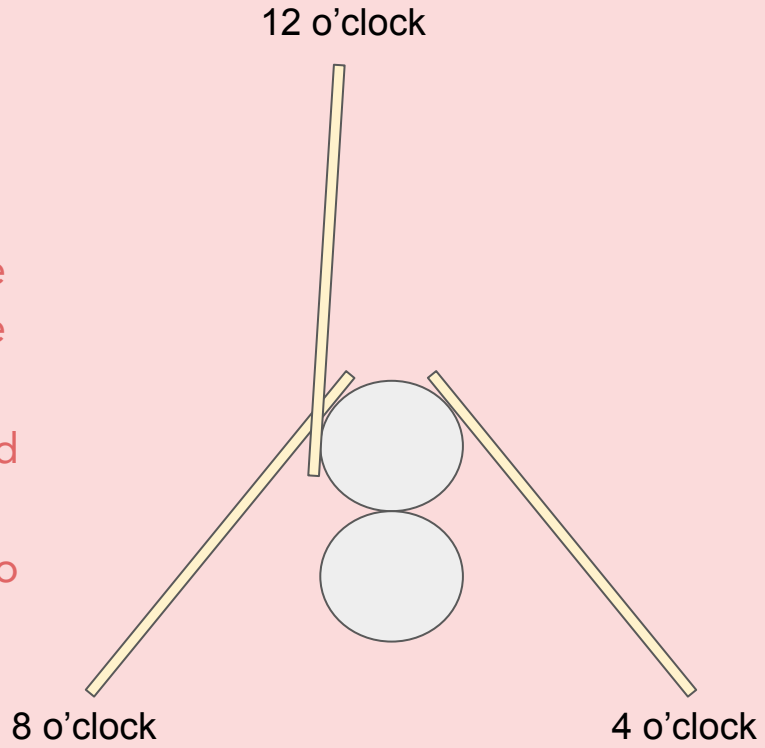
From bird's eye view:



Step 2 (continued)

- Clove hitches should be positioned such that when pressure is applied, the standing ends will be at the “12 o’clock”, “4 o’clock” and the “8 o’clock” directions
  - These angles maximise the usage of the clove hitches as it allows tangential pull of the clove hitches
  - It minimises the turning effect of the spars and also provides a balance of forces at all 3 angles during the tightening of the guylines to ensure that the flagstaff is erected vertically straight

<u>From bird’s eye view:</u>



Step 2 (continued)

- There should be no gaps between the clove hitches to ensure that the clove hitch is as tight as possible
  - Can have 2 cadets tightening 1 clove hitch
- All crosses of clove hitches should be on the bottom spar for stability

Step 3 (continued)

- A manharness should be tied and dressed correctly in the centre of the 1.0m twine
- In order to attach the manharness to the flagstaff, using the excess twine from the manharness, tie west country whipping at the top of the top spar

Step 3 (continued)

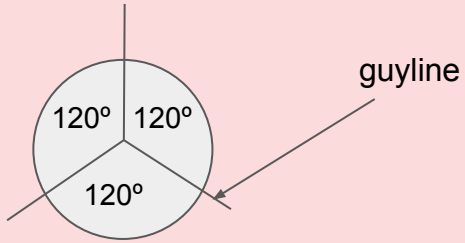
West Country Whipping

- Reef knots around the spar until there is no more excess twine
- Reef knots should be made every 180 degrees
- The whipping should be as high as possible on the flagstaff because that would ensure the flag is at the highest point possible
- The manharness should be facing the 6 o'clock direction

Step 4

- The distance from the pegs to the flagstaff should be equidistant of the middle clove hitch to the base of the flagstaff
  - 2 x 1.2m dowel pole
  - 7 steps
- The 3 pegs will be marked 120° from one another to create an equilateral triangle
  - Distributes forces on the 3 guylines equally and enables tangential pull of clove hitches in the 4, 8 and 12 o'clock direction

Flagstaff: cross-section



Step 4 (continued)

1st Method of Marking

- Place a peg to be used to mark the centre point
    - Peg should stand upright
- Use the other 3 pegs to make an equilateral triangle with that peg in the centre
- From 1 point of the triangle, cadets are to take one peg and walk 7-8 steps forward, maintaining the initial direction
- Repeat until all 3 pegs are marked

Step 4 (continued)

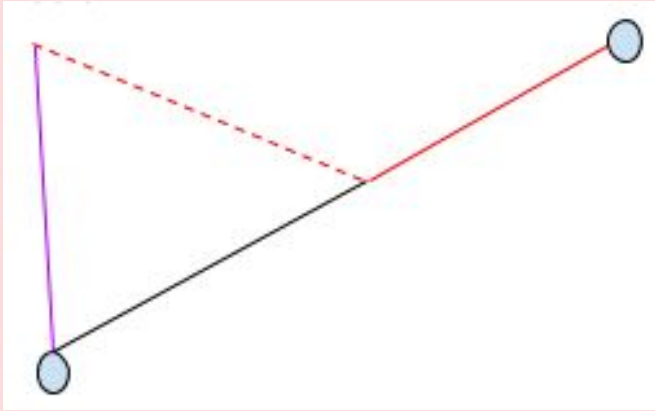
2nd Method of Marking

- Place a peg to be used to mark the centre point
  - Peg should stand upright
- Use the black circle cut-out to mark the centre peg. The white lines should denote the angle at which the 3 pegs need to be marked in
- From the white line on the cut-out, take 7-8 steps forward, maintaining the initial direction
- Repeat until all 3 pegs are marks

Step 4 (continued)

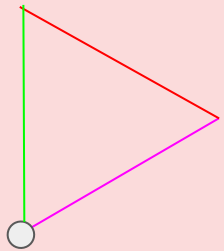
3rd Method of Marking

- Place a peg to be used to mark the centre point
- Use 3 dowel poles to form a triangle, with a peg at one of its apex
- The horizontal dowel pole not in contact with the centre peg will be moved to form a straight line with one of the other poles; this will be the first marking point
- The dowel poles are then shifted such that every 2 equilateral triangle will lead to 120° and hence, the next 2 marking points



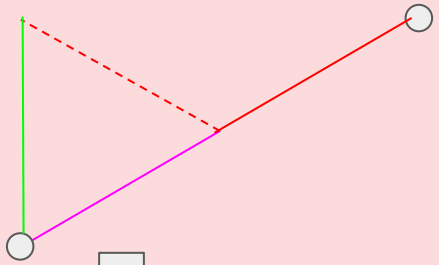
The red pole is shifted to mark the 1st peg and 2 equilateral triangles with 60° on each angle are made to form 120° between the pegs

1.



2.

1st marking



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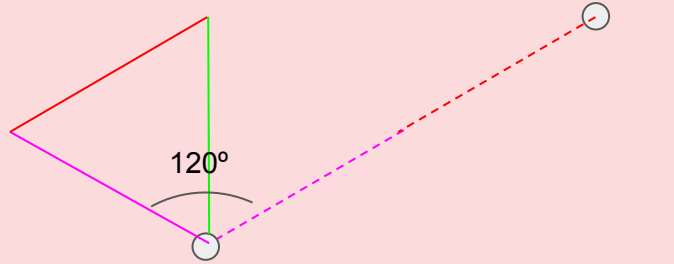
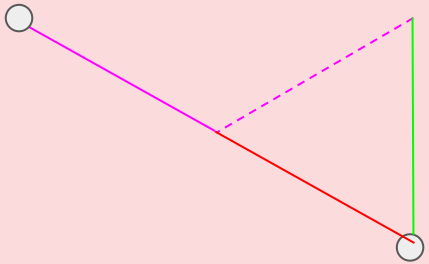
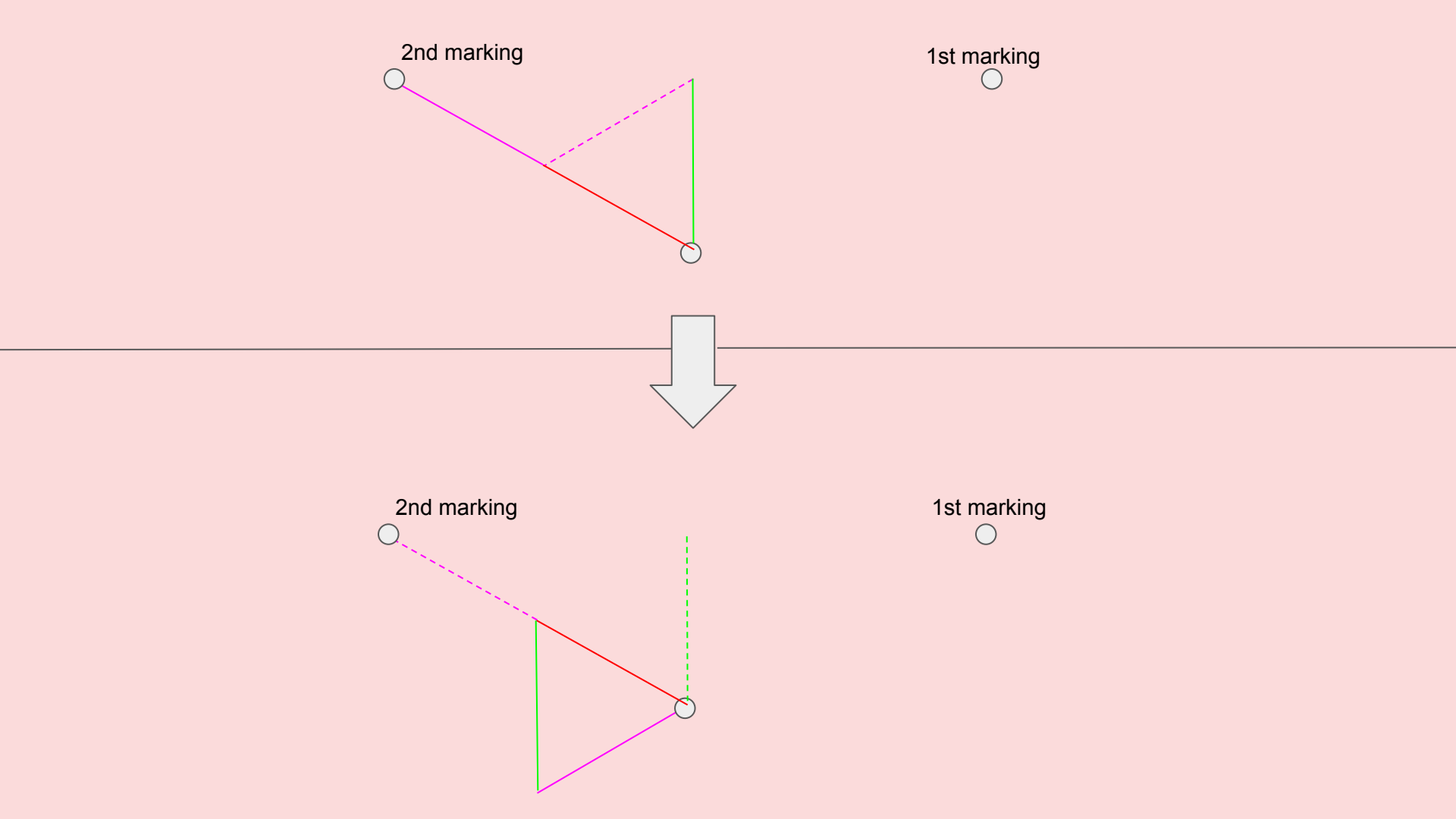


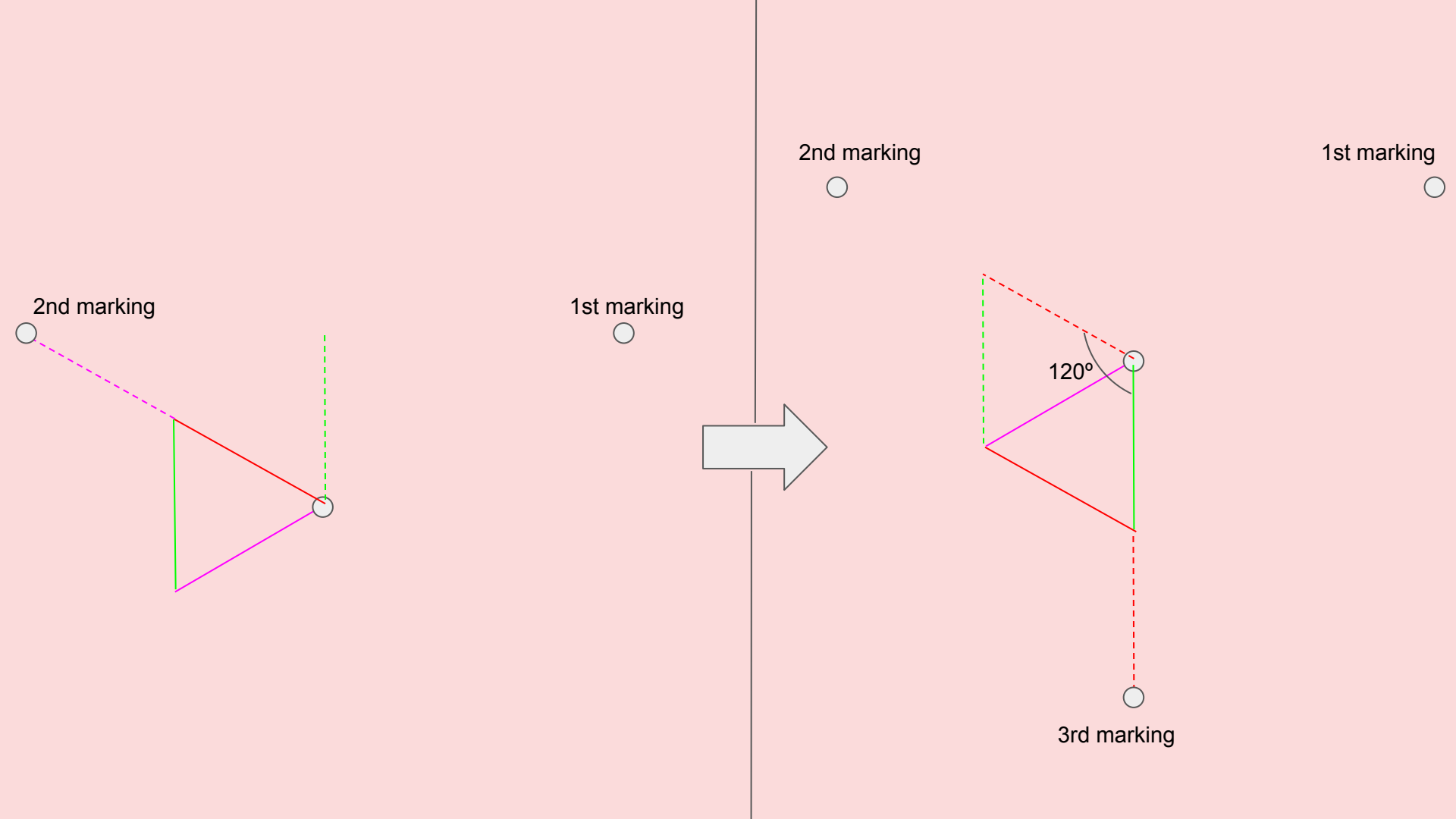
4.

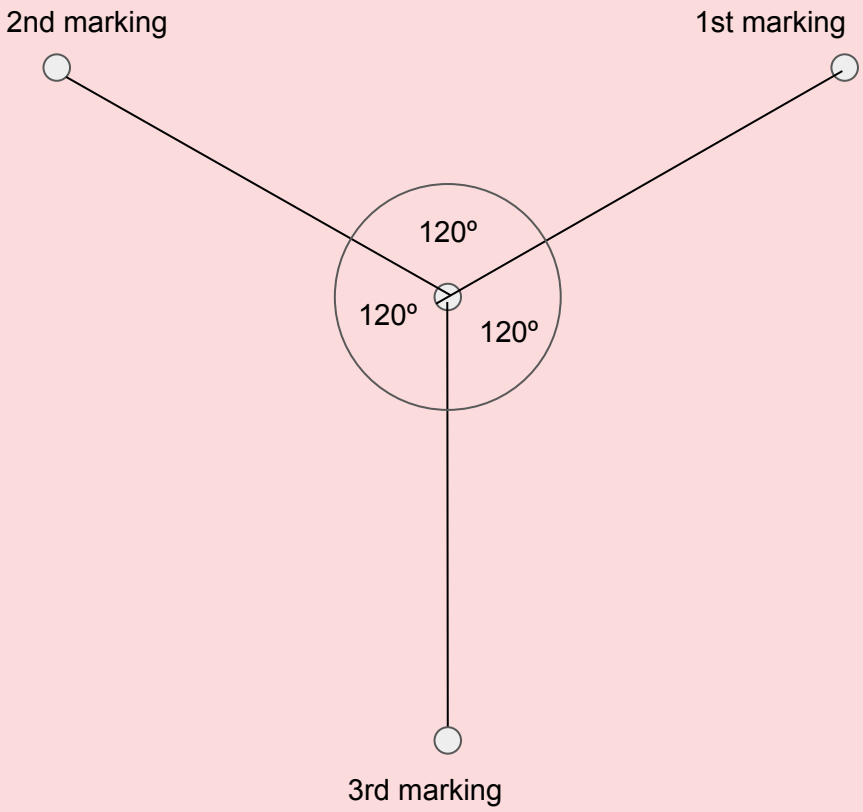
2nd marking



1st marking

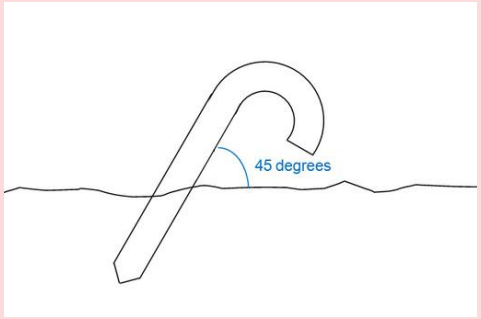

2nd marking
1st marking
2nd marking
1st marking

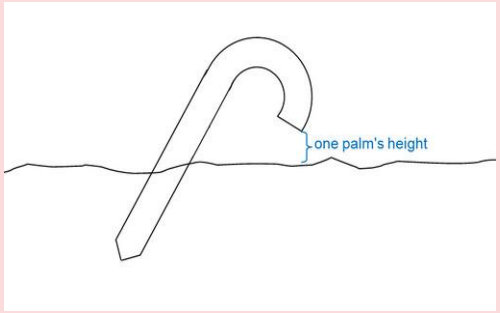

2nd marking
1st marking
2nd marking
1st marking
120º
3rd marking


2nd marking
1st marking
120º
120º
120º
3rd marking

Step 4 (continued)

- After all 3 pegs are marked, hammer in the pegs using the extra peg
- Before removing the marking made by the extra peg, use an object (e.g. rock) to mark the pivot point from which the flagstaff will be erected so as to not lose the pivot point
    - The pegs should be 45° to the ground and one palm width to the ground.



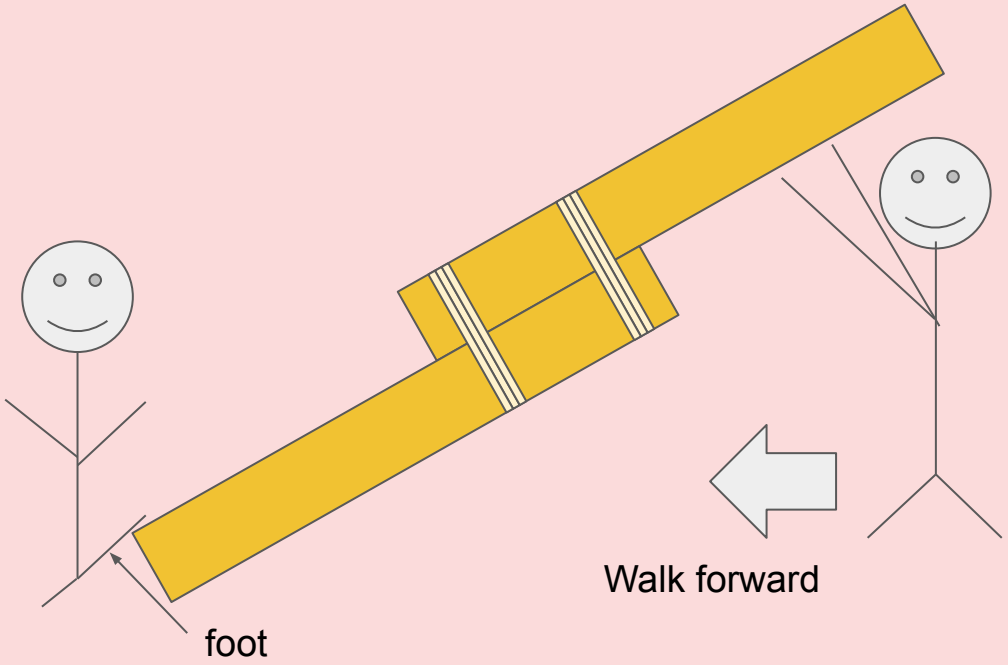


Step 5

- Pass the nylon rope through the manharness in order to form the flag line / halyard
  - Check that the flag line/ halyard is smooth before running it through the pulley or loop
  - If you have a carabiner, attach it to the manharness

Step 6

- Shout “ERECTING FLAGSTAFF” to one another before erecting flagstaff
- 1 cadet is to put her foot at the base of the flagstaff to prevent slipping
- Another cadet will carry the spars and walk towards the base in order to lift it up



Step 7

- While 1 person is holding the flagstaff at the pivot point, 3 cadets will pull the manila hemp very hard simultaneously to tie the tent guy loop and secure the flagstaff to the pegs
    - When tightening the tent guy loops, the 3 people at the pegs should look up and call out to the person who should tighten their tent guy loops more (if flagstaff appears slanted in their POV)
    - 1 person (the cadet can be the one who is holding the flagstaff in place) is to help the other 3 people in ensuring that the flagstaff is straight and not slanted towards a certain direction
    - Consider pulling the tent guy loops with your backs facing the flagstaff for maximum tension (once practised)

Step 7 (continued)

- [E.g.] If the flagstaff is slanted towards the 12 o’clock direction, the cadet pulling the guyline at 12 o’clock should release the tension on the guyline slowly. At the same time, the other 2 cadets in the 4 o’clock and 8 o’clock direction should pull harder in order to shift the flagstaff towards their direction

Step 8

- 1 cadet is to raise/ lower the flag at each time
  - The cadet raising/ lowering the flag has to ensure that the flag does not touch the ground at all times as a form of respect for the flag
- Cadets should inform one another when the flag is being raised or lowered
- Before she raises/ lowers the flag, she is to ensure that all the other cadets are standing in Senang-diri position. After everyone is standing in Senang-diri position, the cadet is to command the following commands before and after raising and lowering the flag
- Before raising/ lowering the flag: Dengan Lompat, Sedia
  - The cadet raising/ lowering her flag should execute this drill before commanding the rest
  - This drill is executed by jumping into Sedia position and cutting your arms to the sides immediately

Step 8 (continued)

- A flag has 2 loose ends used for securing it to a flag line/ halyard
- Secure the 2 ends of the flag line/ halyard to the 2 loose ends of the flag using a sheet bend (for ropes of different thickness) or a reef knot (for ropes of equal thickness)
    - Make sure the knot is secured (important!)
- Ensure that the flag will be raised in the correct orientation
- To end off and secure the flag, first tie a half hitch using the end of the halyard. Loop back and cut the halyard itself, making a few rounds upwards till a short length is left. Tuck the end underneath the halyard itself to complete

Unpitching Procedure

- Before unpitching, make sure that everyone in the area has been informed so as to ensure safety
- Remove the whole pitch by releasing one guyline. At the same time, another cadet is to place her foot at the base of the flagstaff with another cadet holding the spar and walking it down