

# **Pre-Competition Activity**

The Pre-Competition activity is designed as a taster activity to help competitors to prepare themselves for the competition.

The Pre-Competition Activity Task is outlined below:

One area where competitors have historically lost marks in competition is with the hand saw. Cutting a mitre joint may seem easy, but to perfect it and do it quickly is an art.

As part of your pre competition activity, practice cutting mitre joints, learn to understand internal and external measurements.

For the exercise you could complete 8 mitres to create a small box frame. Your external measurement should be 500mm.

#### **Step 1 – Measure and Mark Timber**

Before we start cutting, the first job is to measure and mark the exact cutting position on our piece of timber

The best route to take is to always measure, mark and cut from the internal point of the joint and not the external.

One other point to think about is where you actually put your mark – have you marked your pencil point directly on the point you need to cut or have you put the mark to the left or right of your measurement?

This is an important point to consider as if you mark your pencil line directly on the cutting point, meaning the cutting point is at the centre of your pencil line then you will need to make sure that you cut through the middle of the pencil line.

Likewise, if you put your pencil mark to the left or the right of your cutting point, you will need to make your cut to the left or right of the mark.

There's no real right or wrong method of marking, just make sure you know exactly where you have put your mark in relation to where you need to cut. Even a fraction of a millimetre off and there will be a gap in the joint that will stand out a mile off.

Additionally, you should also be aware of the width of the saw blade itself and how much timber material it will remove.

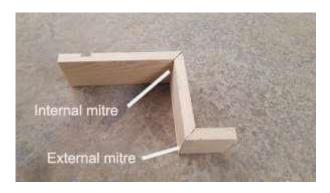
The width of the channel that a saw blade creates is known as the "kerf" and how wide this channel is depends on the width of the blade itself, how much the blade moves as you saw through and also the set of the teeth on the blade.

This will vary depending on the type of saw you're using and the type of saw, so the best way to find out is to cut down through a piece of waste timber and then measure it.

You will then also need to take this into consideration when marking.

Remember, for your frame you would measure the external length of each section and cut the wood to that exact length and then cut a 45° mitre cut at each end.

There are also internal and external mitres.



Think about this as you construct the frame.

# **Step 2 – Cutting your Mitre.**

There are several methods used to cut the mitre joint with a hand saw.

- 1. Many handsaws come with a mitre slot on the handle of the saw. By placing the handle against the wood, the blade creates a 45 degree angle that can be marked and cut along to form the mitre.
- 2. Mitre Block. A mitre block is a plastic, metal or wooden box used together with a hand saw to cut wood at preset angles. It's more precise than cutting wood freehand, because the slots prevent the saw from moving sideways as you work. Remember to clamp down the mitre block. You will not be able to hold the mitre block steady and produce a cut at the same time



3. Using a square. There are 3 types of square that can be used. Combination square, Speed square and a Tri square. In landscaping, combination and speed square are the most commonly used.





Combination

Speed

## **Step 3 - Using your handsaw.**

- Place the saw's teeth that are closer to the handle at the cutline on the far edge of the board.
- Use the tip of your thumb that isn't holding the saw to keep the blade steady and in position along the cutline.
- Draw the saw toward you with a short motion to make a small notch or groove in the edge.
- Lift the saw and reposition it into the groove. Make another short stroke with light force to deepen your starting cut.
- After a couple of back cuts, continue cutting with forward and back motion to work the saw along the cutline on the board face.
- Use long, easy strokes so all of the teeth can cut.
- Let the saw do the work. Don't grip to tightly and don't use too much force.
- Near the end of the cut, shorten your strokes and increase the cutting angle for a clean finish.
- If you veer away from the cutline, stop sawing. Remove the blade and begin cutting again where you got off track.



## What will the Mitre Look like

Once you have done your measuring and done your cuts, what should a 45 degree mitre look like.





Poor Mitre Finish

**Excellent Finish** 

So have a go at building your square frame, using the tips above. Fix your mitres with a screw or wood glue to hold in place.

A great little task to test your skills.