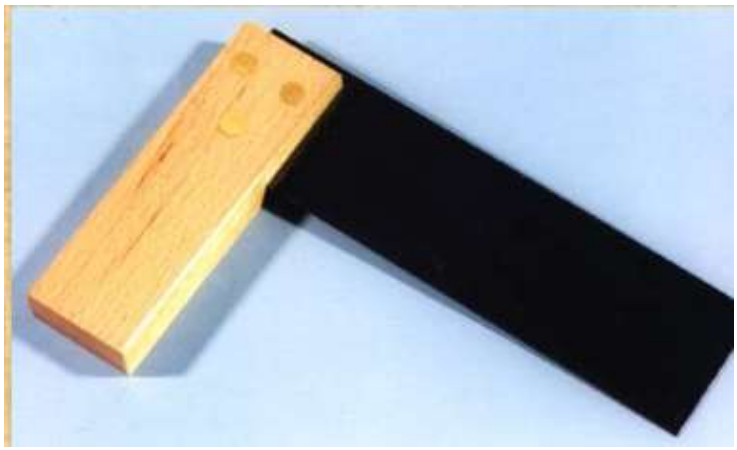
INTRODUCTION TO CARPENTRY TOOLS

1. Try Square
2. Steel Rule
3. Marking Guage
4. Coping Saw
5. Tenon Saw
6. Penon Saw
7. Ironjack Plane
8. Benchwise

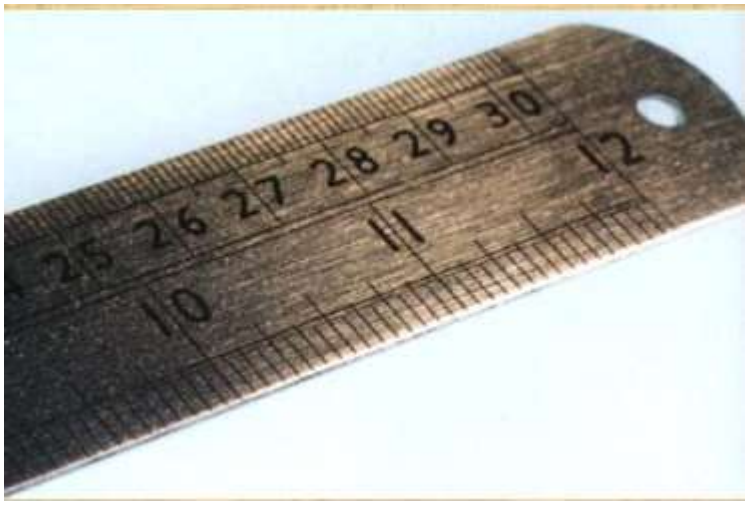
1. Try Square

This is used to mark lines at 90 degrees to a straight edge. It is used to mark out lines square to the face edge and face side. It may also be used to check if edges are straight. If the try square is placed on the edge of the material and held up to a light, any light shining through between the material and the try square blade indicates that the edge of the material is not straight.



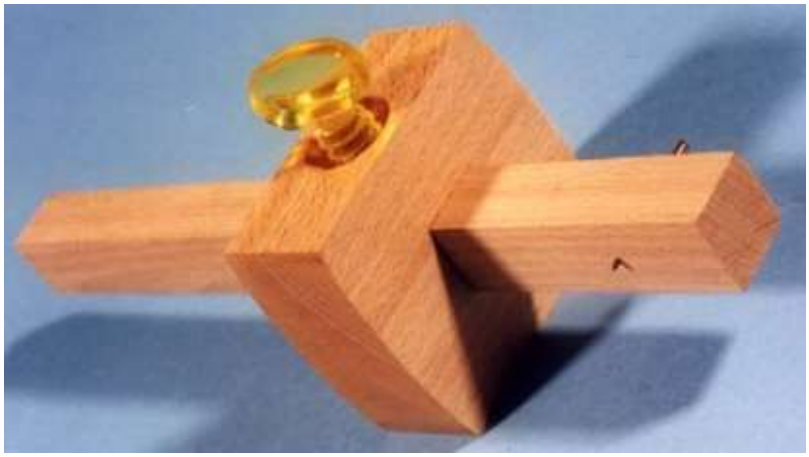
2. Steel Rule

A steel rule is a very accurate marking and measuring tool. The steel is thin and the markings on the rule are very fine. The measurements are in millimetres on one edge and inches on the other. The steel rule can also be used as a straight edge to check if materials or edges of materials are straight. The measurements on the steel rule go all the way to the end unlike the plastic ruler. This is because the rule may be used to measure inside pipes. It may also be used to measure diameters and circumferences of pipes and tubes accurately. The end of the rule with the measurements to the edge is called the zero end.



3. Marking Guage

The marking gauge is used on wood.It is used to mark straight lines parallel to a straight edge.The marking tool has an adjustable stock (the stock slides up and down the stem) and is set using a steel rule. When in use the stock must be pressed tightly against the face edge of the material. It is pushed away from the body with the spur (back end of the pin) inclined at an angle. The point should leave a narrow groove along the face surface.



4. Coping Saw

Coping saws are used to remove complicated shapes and cut curves in woods and plastics. The blade is held in a frame and may be easily replaced if broken. The teeth of the blade point backwards towards the handle. The saw cuts on the pull stroke and not on the forward stroke. This is because the blade is too flexible to be pushed. The blade can be angled in the frame if the frame gets in the way when cutting larger sheet materials.

5. Tenon Saw

Tenon saws are used to cut straight cuts in wood and some plastics. This type of saw has a stiff back and is suitable for detailed cuts. The saws without this type of stiff back are more flexible and are designed to cut large panels. The tenon saw is generally used to cut Woodwork joints.

6. Penon Saw

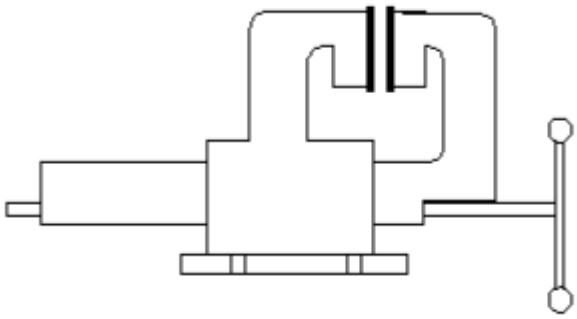
Large panels or sheets of materials for example plywood or M.D.F require larger ripsaws in order to cut them by hand. Sheets that are small enough may be held in the vice whereas larger sheets may need to be supported on special types of portable carpenter's supports called trestles.

7. WOOD PLANES

Iron jack Plane is used to make smooth surface. It is made of Cast Iron.

8. Benchwise

A bench vice is secured on the work bench to grip work piece while it is worked on.



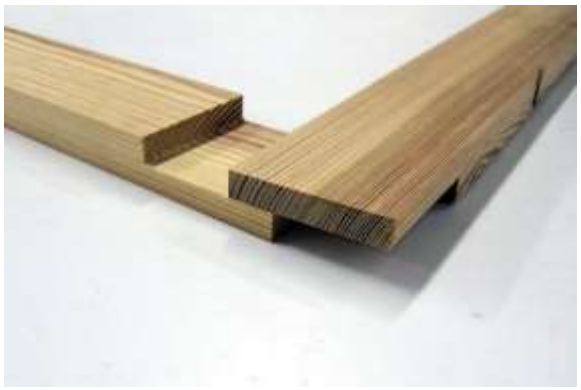
BENCH VICE

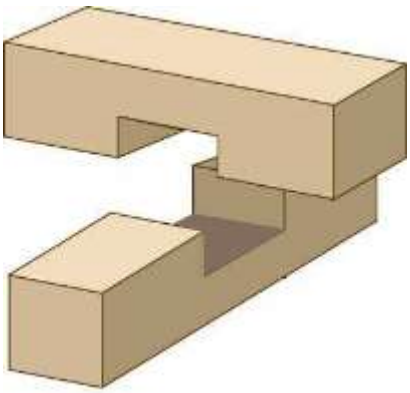
COMMON WOODWORKING JOINTS

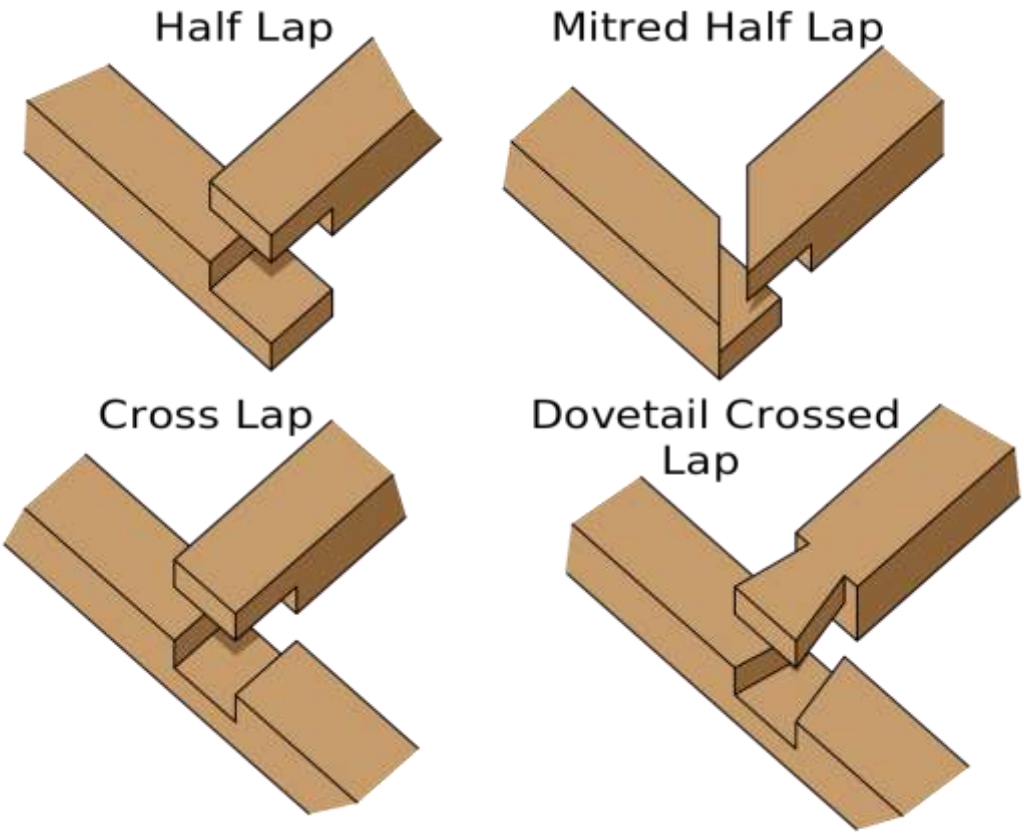
1. Lap Joint

The lap Joint is obtained by overlapping the woods

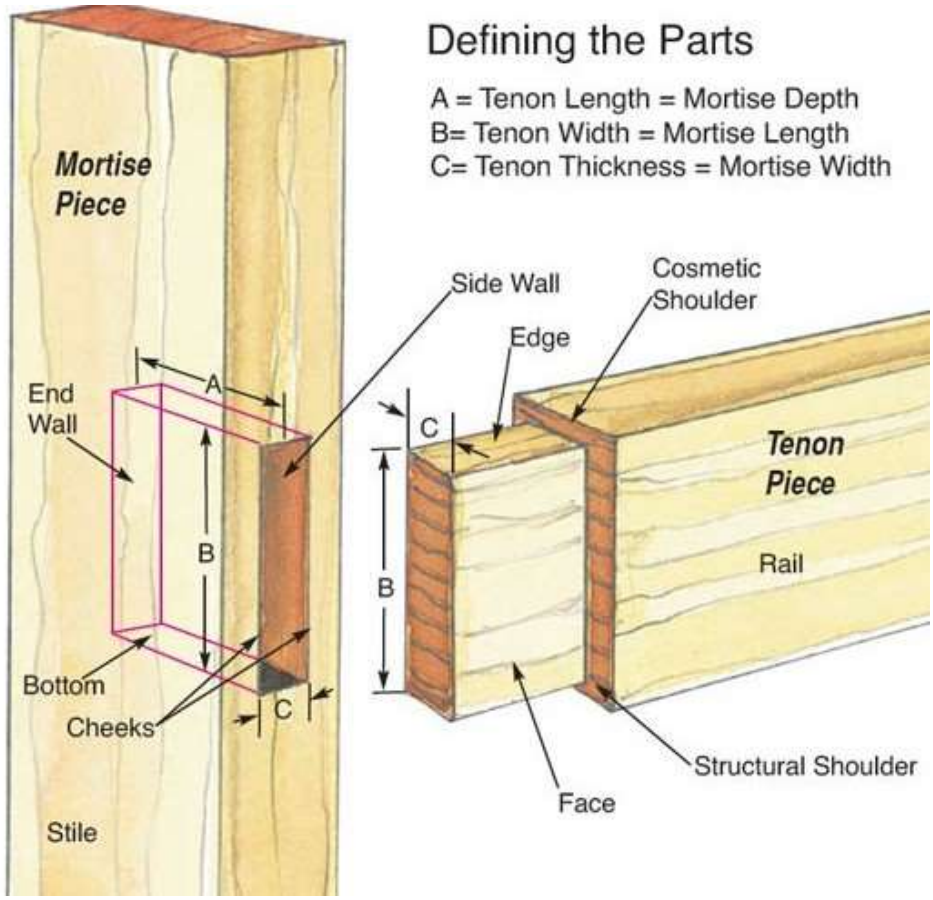
Lap joint simply refers to the process of joining two pieces of a project by overlapping them. There are four basic versions of the lap join most commonly found in cabinetry woodworking. Each has a specific strength and cabinetmakers will choose which to use according to the needs of the project. Half lap, mitred half lap, cross lap and dovetail lap are the four most commonly used forms of the lap joint. Each style has a cut characteristic that makes it easily identifiable. Lap joints can be divided generally into two categories: full and half. Full laps do not remove any material from either part being joined, so the end results incorporate the full combined thickness of the original pieces. Half laps are much more common as they provide an equally secure bond but allow for smooth transitions and even thicknesses throughout a project.







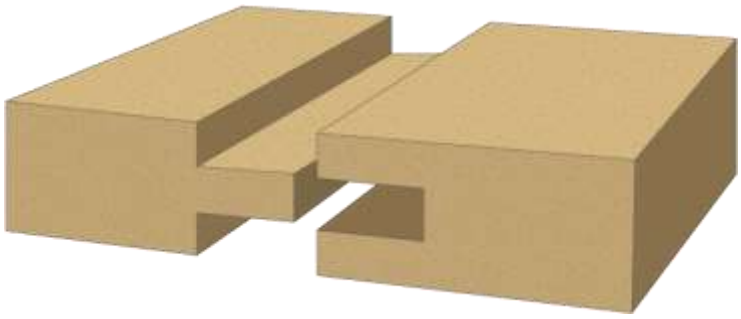
2. Tenon and mortise joint



The mortise and tenon joint is another one of the strongest and most appealing woodwork joints able to be made because of its flush fitting design.Like the dovetail joint this woodwork joint can be difficult to properly construct but it is incredibly strong and aesthetically pleasing if constructed well.This woodwork joint consist of a tongue that is secured into a slot and it is used in areas such as table legs. For structural areas like these the joint must be tight fitting to ensure maximum strength but also to achieve a neat flush look.There are slightly different versions of this woodwork joint which include double tenons, twin tenons and haunched mortises and tenons.The haunched version of this joint consist of an extra piece of wood that is half the depth of the mortise and it is mostly used at the end of the timber to prevent twisting.The double and twin tenons are exactly as they sound being two tenons next to each other which create an even stronger joint. The double tenon is made of two separate tenons while the twin tenon is two tenons which are joined in the middle.Areas where the mortise and tenon joint or some form of it are most effective and best suited are areas which are required to support a large amount of weight or are structurally important such as the rails

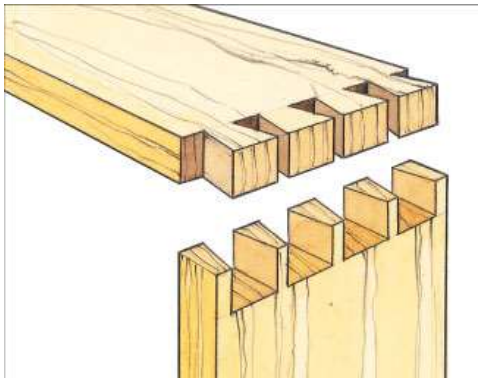
and legs of a table or chair.The tenons should be made to the correct length and thickness depending on how much weight will need to be supported.

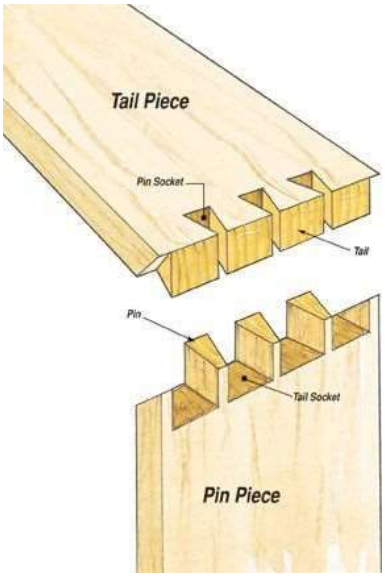
3. A tongue and groove joint



A tongue and groove joint is a unique woodwork joint that is attached edge to edge with two or more pieces of timber. It is made with one edge consisting of a slot that runs down the entire length of the timber and a tongue which fits into the slot. This groove and tongue feature creates a reasonably strong and aesthetically pleasing joint that can be used in areas such as floorboards, lining boards, wood panelling and table tops. The tongue with a grove feature is easy to attach together because of its simplicity and it allows for a tight fit that has plenty of surface area for adhesives. These joints can be very difficult to make without the right woodwork machinery. You are more likely to buy timber with this joint already in it, such as lining boards than you are to make it yourself. Because of the many types of timbers readily available with this particular type of joint it is probably best to buy what you need than to try and make the joint because it is much simpler than attempting to make the joint which requires great tools, machinery and skill.

4. Dovetail Joint





The dovetail joint is one of the hardest if not the hardest woodwork joint to construct and as its name suggests the joint consists of pins that look like dovetails which interlock into slots.This pin and slot combination gives the joint great strength and aesthetics but it requires good precision and accuracy during the construction of the joint or it may become loose and it can be unattractive. The pins are glued into the slots and a nail on each pin can be inserted to help keep the dovetail joint strong and square until the glue dries. These joints are most commonly found on the front of drawers or on boxes such as a wooden tool box because of its great strength and very attractive look if the joint has been well constructed. There is usually a three pin setup but more or less pins can be used depending on how much strength and aesthetics you want.

https://www.1001pallets.com/common-wood-joints/

https://www.youtube.com/watch?v=aBodzmUGtdw