

CARPENTRY

Marking and Measuring Tools:

Accurate marking and measurement is very essential in carpentry work, to produce parts to exact size. To transfer dimensions onto the work; the following are the marking and measuring tools that are required in a carpentry shop.

Steel Rule and Steel Tape

Steel rule is a simple measuring instrument consisting of a long, thin metal strip with a marked scale of unit divisions. It is an important tool for linear measurement. *Steel tape* is used for large measurements, such as marking on boards and checking the overall dimensions of the work.

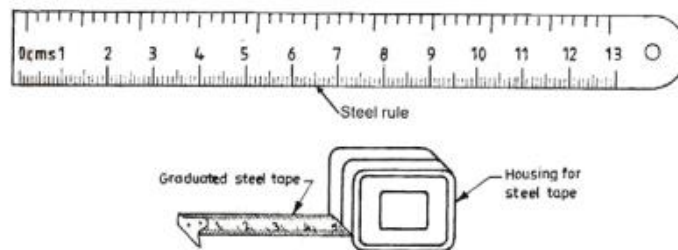
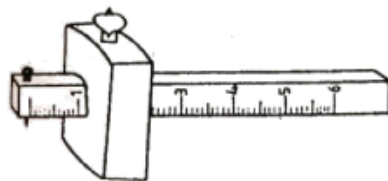


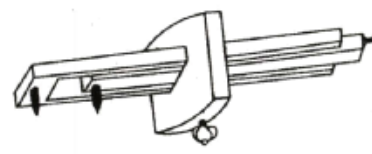
Fig: Steel Rule and Steel Tape

Marking Gauge

It is a tool used to mark lines parallel to the edge of a wooden piece. It consists of a square wooden stem with a sliding wooden stock (head) on it. On the stem is fitted a marking pin, made of steel. The stock is set at any desired distance from the marking point and fixed in position by a screw. It must be ensured that the marking pin projects through the stem, about 3 mm and the end are sharp enough to make a very fine line. A *mortise gauge* consists of two pins. In this, it is possible to adjust the distance between the pins, to draw two parallel lines on the stock.



Marking gauge



Mortise gauge

Fig: Marking Gauges

Try - Square

It is used for marking and testing the squareness and straightness of planed surfaces. It consists of a steel blade, fitted in a cast iron stock. It is also used for checking the planed surfaces for flatness. Its size varies from 150 to 300 mm, according to the length of the blade. It is less accurate when compared to the try-square used in the fitting shop.



Fig: Try Square

Holding Tools:

Carpenter's Vice

It is used as a work holding device in a carpenter shop. Its one jaw is fixed to the side of the table while the other is movable by means of a screw and a handle. The Carpenter's vice jaws are lined with hard wooden faces

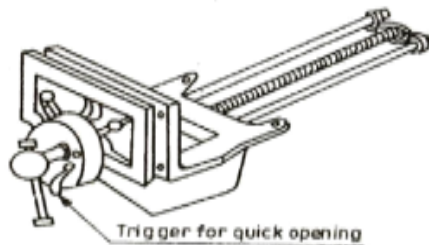


Fig: Carpenters Vice

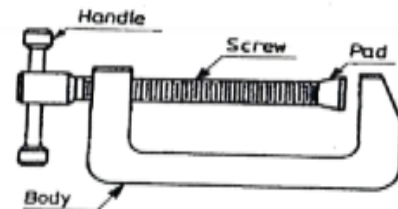


Fig: C-Clamp

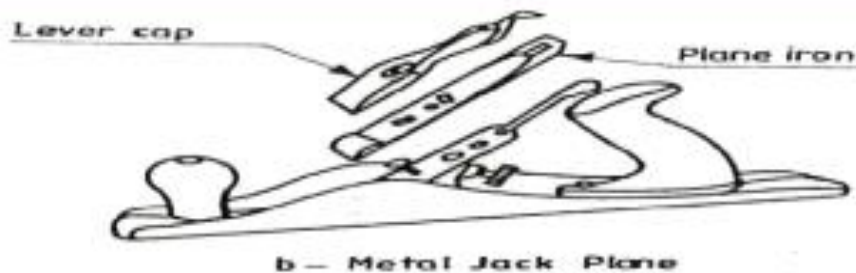
Instructions for Laboratory

Planing Tools:

Planing is the operation used to produce flat surfaces on wood. A plane is a hand tool used for this purpose. The cutting blade used in a plane is very similar to a chisel. The blade of a plane is fitted in a wooden or metallic block, at an angle.

Jack Plane

It is the most commonly used general purpose plane. It is about 35 cm long. The cutting iron (blade) should have a cutting edge of slight curvature. It is used for quick removal of material on rough work and is also used in oblique planning.



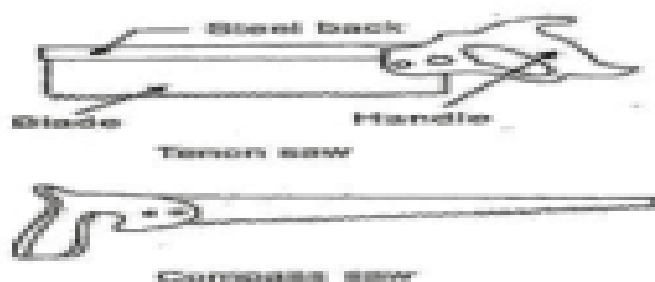
Cutting Tools:

Saws

A saw is used to cut wood into pieces. There are different types of saws, designed to suit different purposes. A saw is specified by the length of its toothed edge.

Tenon Saw

It is used for cutting the stock either along or across the grains. It is used for cutting tenons and in fine cabinet work. However, it is used for small and thin cuts. The blade of this saw is very thin and so it is stiffened with a thick back steel strip. Hence, this is sometimes called as back-saw. In this, the teeth are shaped like those of cross-cut saw.



Chisels:

Chisels are used for cutting and shaping wood accurately. Wood chisels are made in various blade widths, ranging from 3 to 50 mm. They are also made in different blade lengths. Most of the wood chisels are made into tang type, having a steel shank which fits inside the handle. These are made of forged steel or tool steel blades.

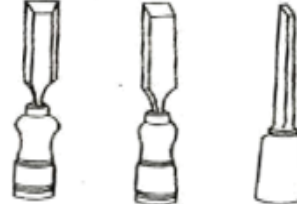
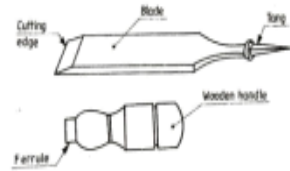


Fig: Types of Chisels