

PENANG SANGAM HIGH SCHOOL

P.O.BOX 44, RAKIRAKI

WEEK 21 WORKSHEET

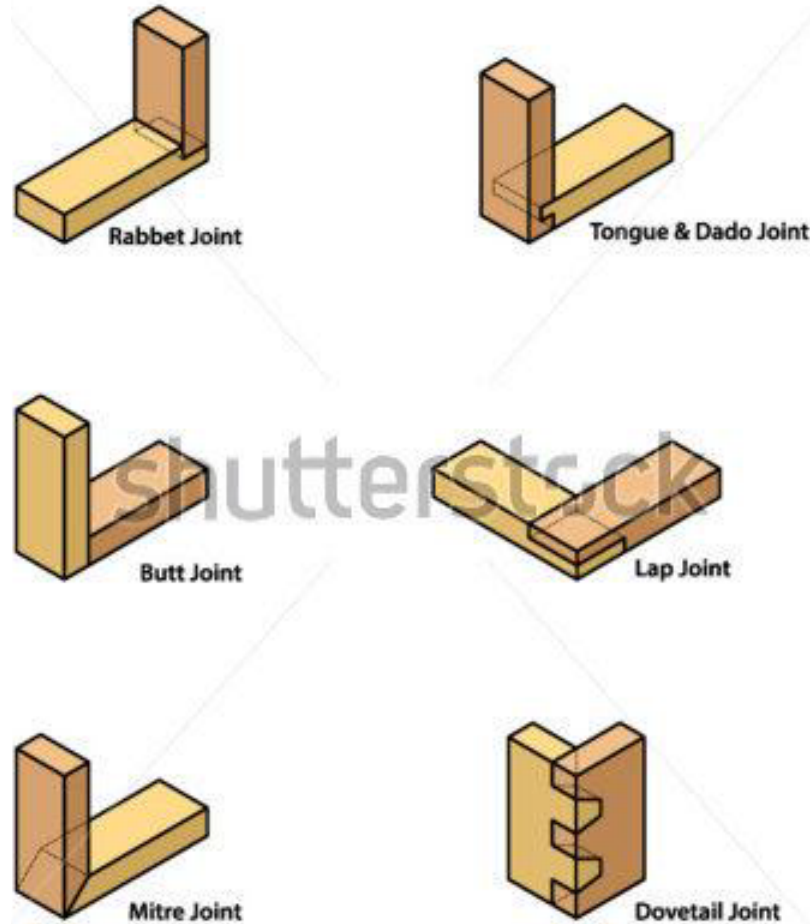
Subject: Basic Technology

Year/Level: 10

Strand	BT10.6 JOINTS AND PROCESSES
Sub Strand	BT10.6.1 WOODWORK JOINTS
Content Learning Outcome	BT10.6.1.1 Identify and state the use of complex woodwork joints and develop confidence in skillful construction of the joints incorporated in tasks, projects and other artifacts.

LESSON NOTES

Continued from week 20 Lesson notes....

JOINTS AND PROCESSES**FRAMING JOINTS**

Framing joints are those used in frame-like constructions. The members are usually constructed with their edges at right angles to each other; in contrast to the angle joints where the sides form the right angle.

Halved Joints

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Halved joints are a type of framing joint. The name is applied to joints where the pieces of timber which meet or cross each other are halved. At the joint, each piece is $\frac{1}{2}$ the thickness of the rest of the piece. The result is an assembled flushed joint, in which the surfaces of both pieces are flushed. Halved joints are used for constructing simple frames.

Tee-Halving Joint

The tee-halved joint consists of a pin (a) on the end of one piece which fits into a socket (b) in the other piece (Fig. 1).

The pin is half the thickness of the timber, and the depth of the socket equals the thickness of the pin. The shoulder of the pin (c) fits against the face edge of the socket (Fig. 1).

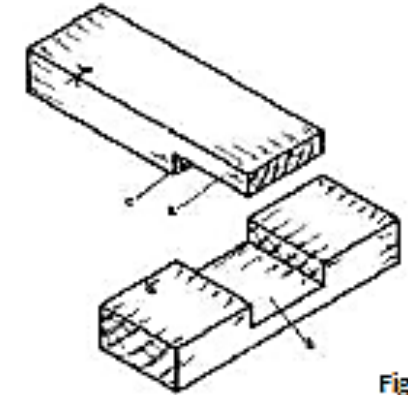


Fig. 1

Constructing the joint:

Step 1 - Preparation of timber

- (a) Prepare the timber using the FEWTEL (Face Side, Face Edge, Gauge for Width, Gauge for Thickness, Shoot the End, Measure the required Length) method.

Step 2 - Marking out

- (b) Mark the length of the pin by placing the socket piece on top of it and marking at the width. A small amount of waste can be left on the end of the pin, to be planed off after the joint is assembled.
- (c) Make lines square at the shoulder of the pin, drawing them across the side and halfway down the edges, with a try square and pencil (Fig. 2). Mark the waste.
- (d) Mark the position of the socket, using the piece with the pin as a guide. Smooth the pin before using it to mark the socket.
- (e) Square the lines across the side and halfway down the edges with a try square. Mark the waste (Fig. 3).
- (f) Gauge the thickness of the pin around its edges and mark the waste (Fig. 2).
- (g) With the same setting, gauge the depth of the socket on both edges and mark the waste (Fig. 3). Both pin and socket should be gauged from the face side.
- (h) Place the pin over the position of the socket and check the fitting (Fig. 4).

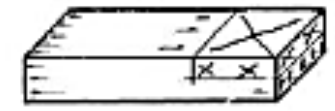


Fig. 2

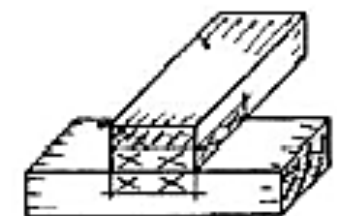
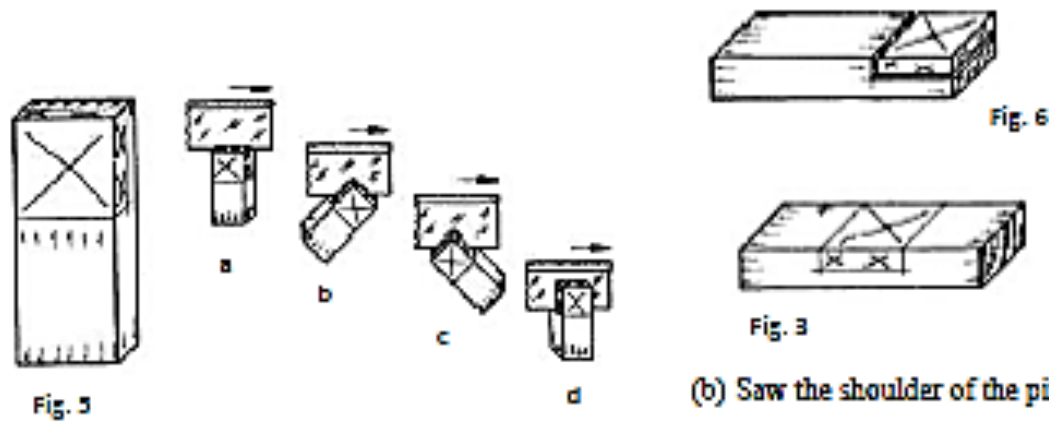


Fig. 4

Step 3 - Cutting the pin

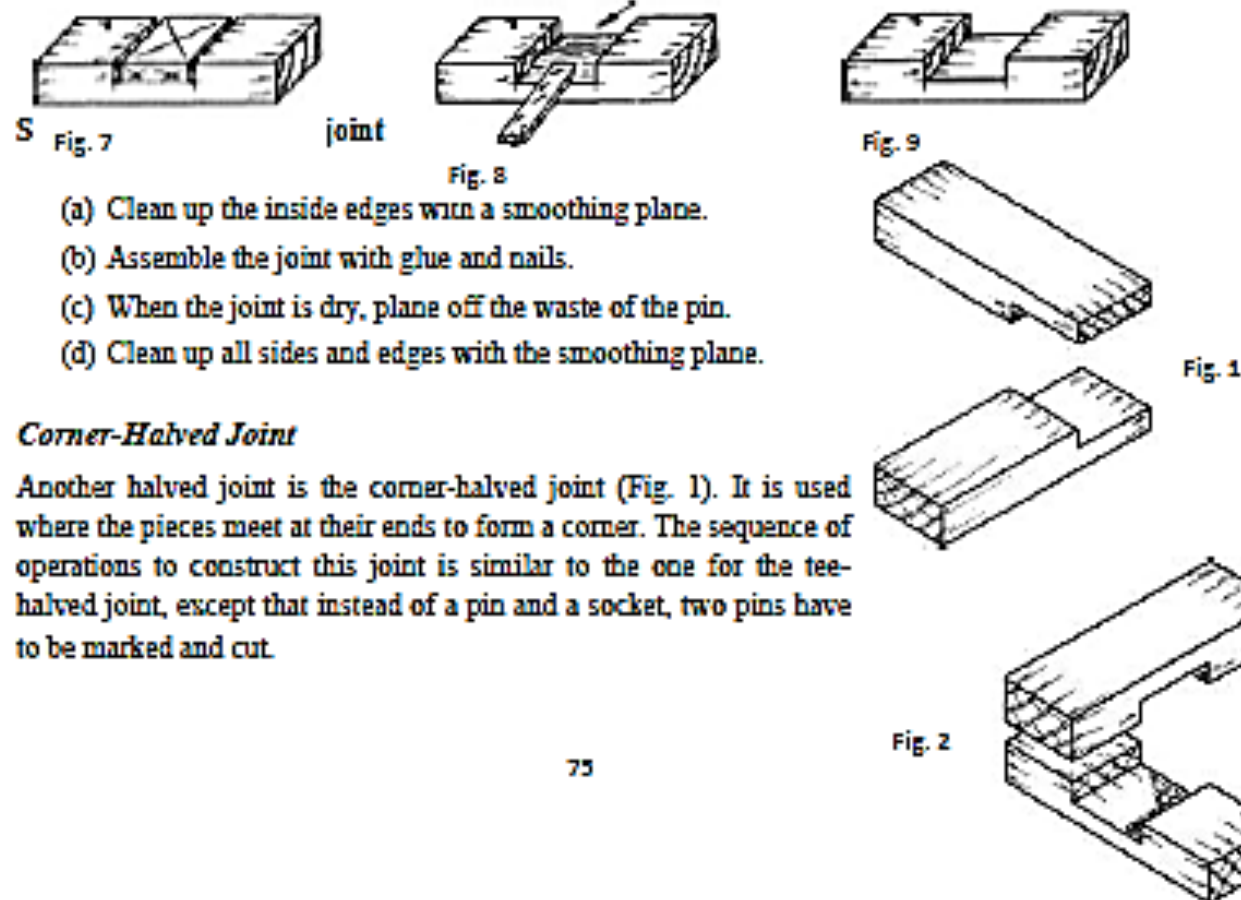
- (a) Rip the thickness of the pin. Cut in stages as shown in Fig. 5, a through d. Take care to keep on the waste side of the line.



- (b) Saw the shoulder of the pin, keeping on the waste side of the line (Fig. 6).

Step 4 - Cutting the socket

- (a) Saw down to the gauge lines of the socket, keeping on the waste side of the lines (Fig. 7).
- (b) Chisel out the waste, chiseling halfway through from both edges (Figs. 8 & 9).
- (c) Test the flatness of the socket with the blade of the try square.



- (a) Clean up the inside edges with a smoothing plane.
- (b) Assemble the joint with glue and nails.
- (c) When the joint is dry, plane off the waste of the pin.
- (d) Clean up all sides and edges with the smoothing plane.

Corner-Halved Joint

Another halved joint is the corner-halved joint (Fig. 1). It is used where the pieces meet at their ends to form a corner. The sequence of operations to construct this joint is similar to the one for the tee-halved joint, except that instead of a pin and a socket, two pins have to be marked and cut.

- 1. Sketch the different types of framing joints.

