

NATIONAL TECHNICAL CERTIFICATE EXAMINATION

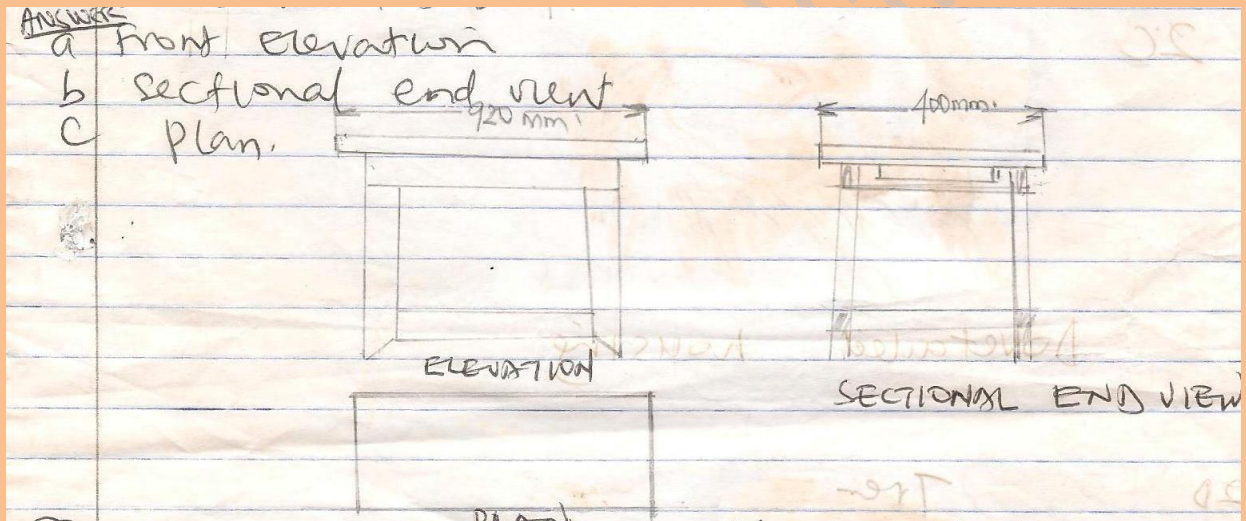
FURNITURE MAKING (FURNITURE DESIGN AND CONSTRUCTION)

PAPER CODE 231 – 1

1a. A rectangular occasional table is to be made for the office of a principal. The table is to be made from 22mm thick wood, the length is 920mm, width is 400mm and height is 400mm. Use your discretion in determining the width of the legs, rails and draw to a scale 1:5?

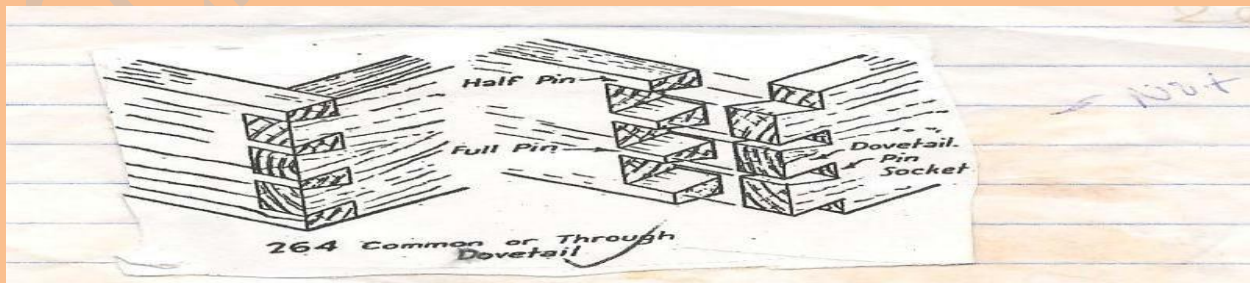
Answer:

- (a) Front elevation
- (b) Sectional end view
- (c) Plan

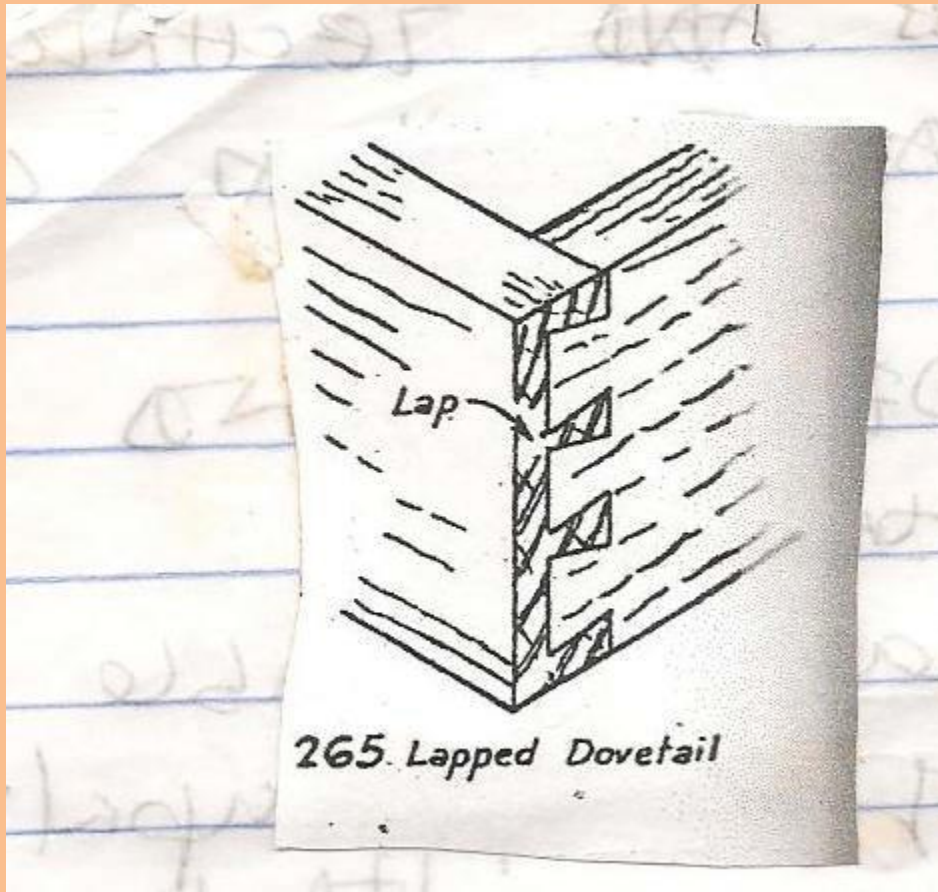


2. Make real sketches of the following jointly.

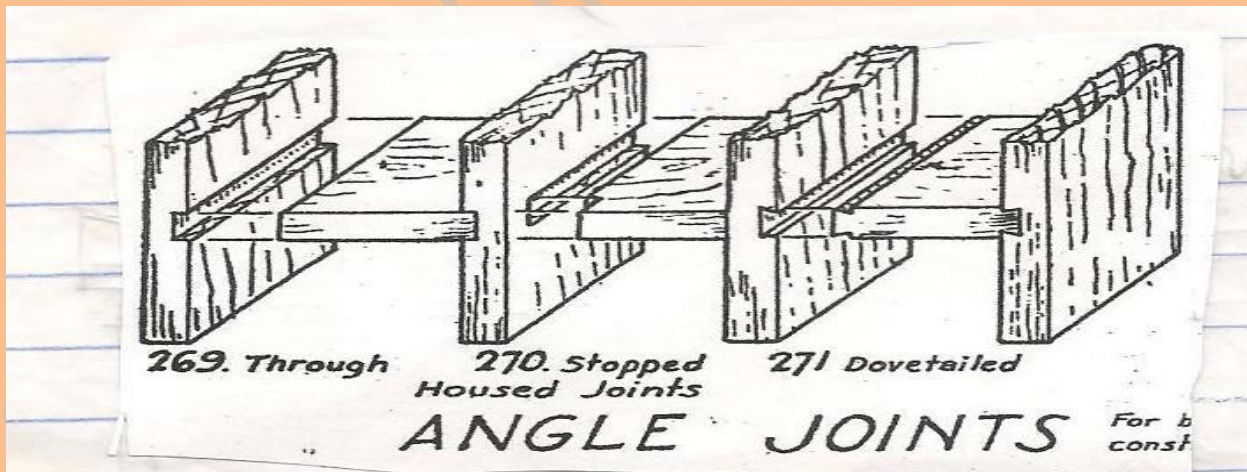
- (i) Hand made through dovetail



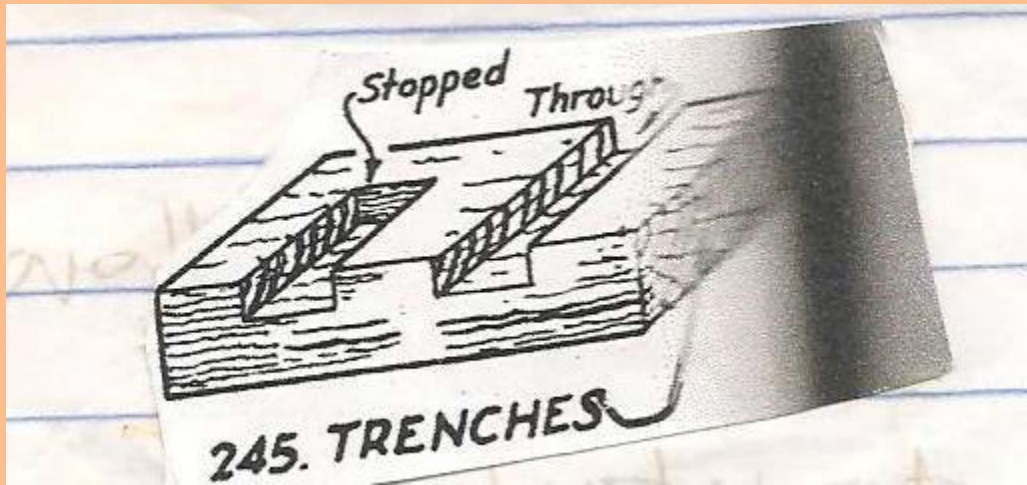
2b. Machine made Lapped Dovetail.



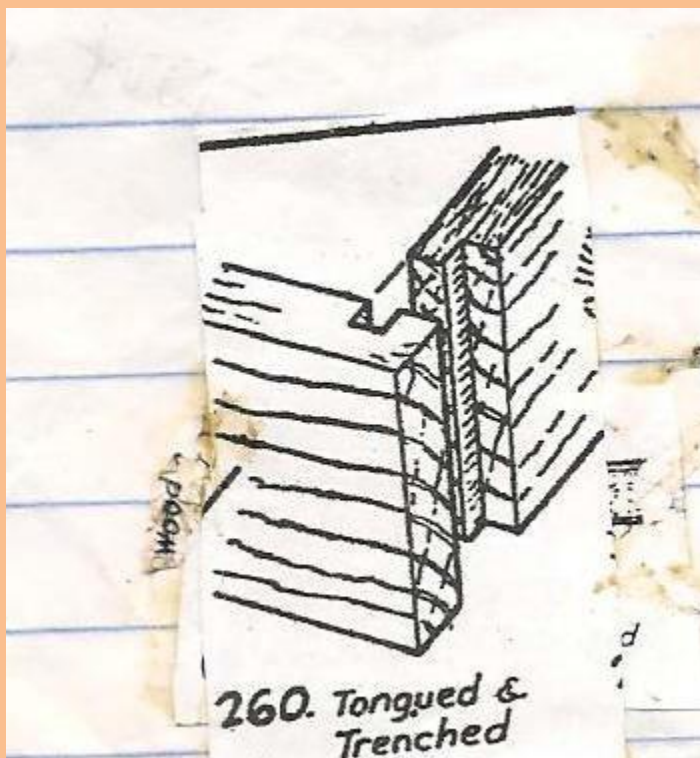
2c. Dovetailed housing.



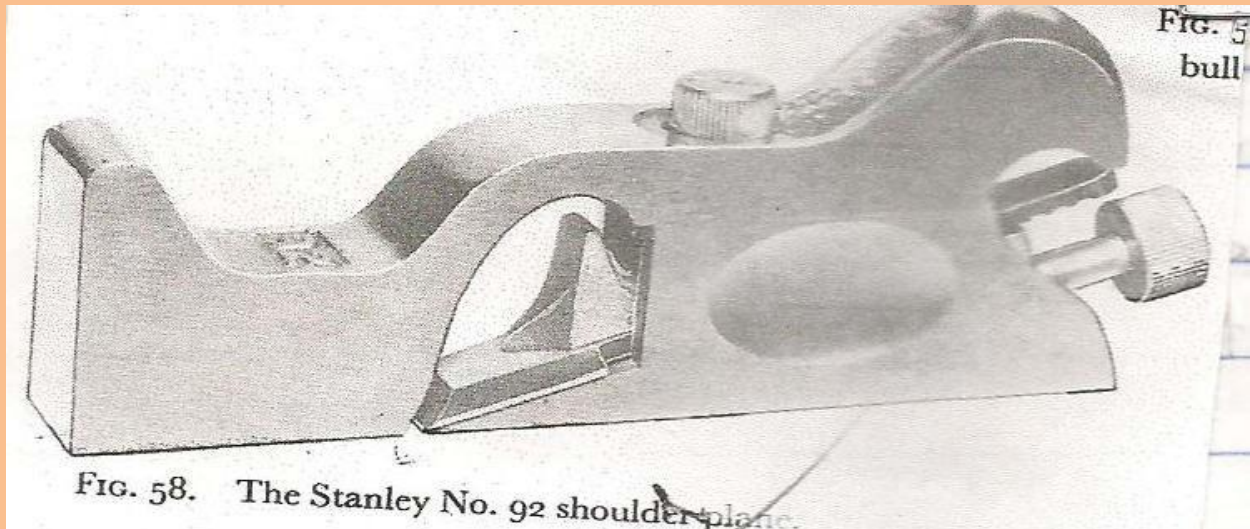
2d. Trenches.



2e. Tongued and trenched.

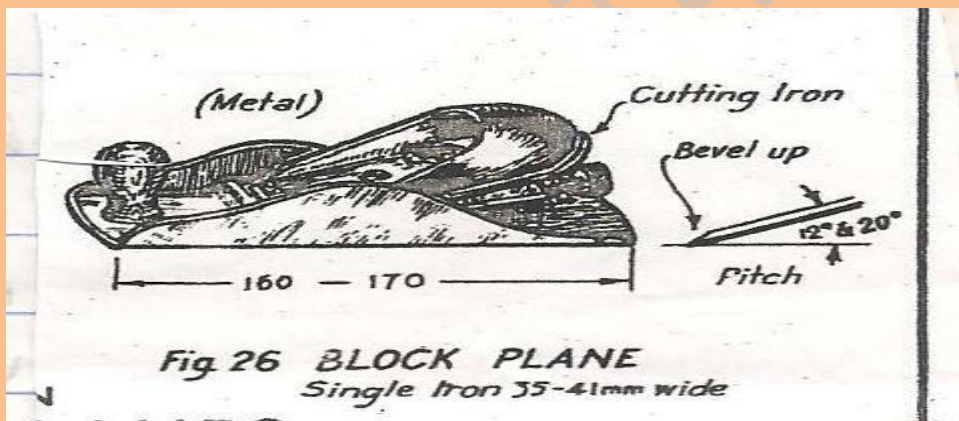


3a. Explain with the aid of Sketches, the following hand tools used in furniture construction.



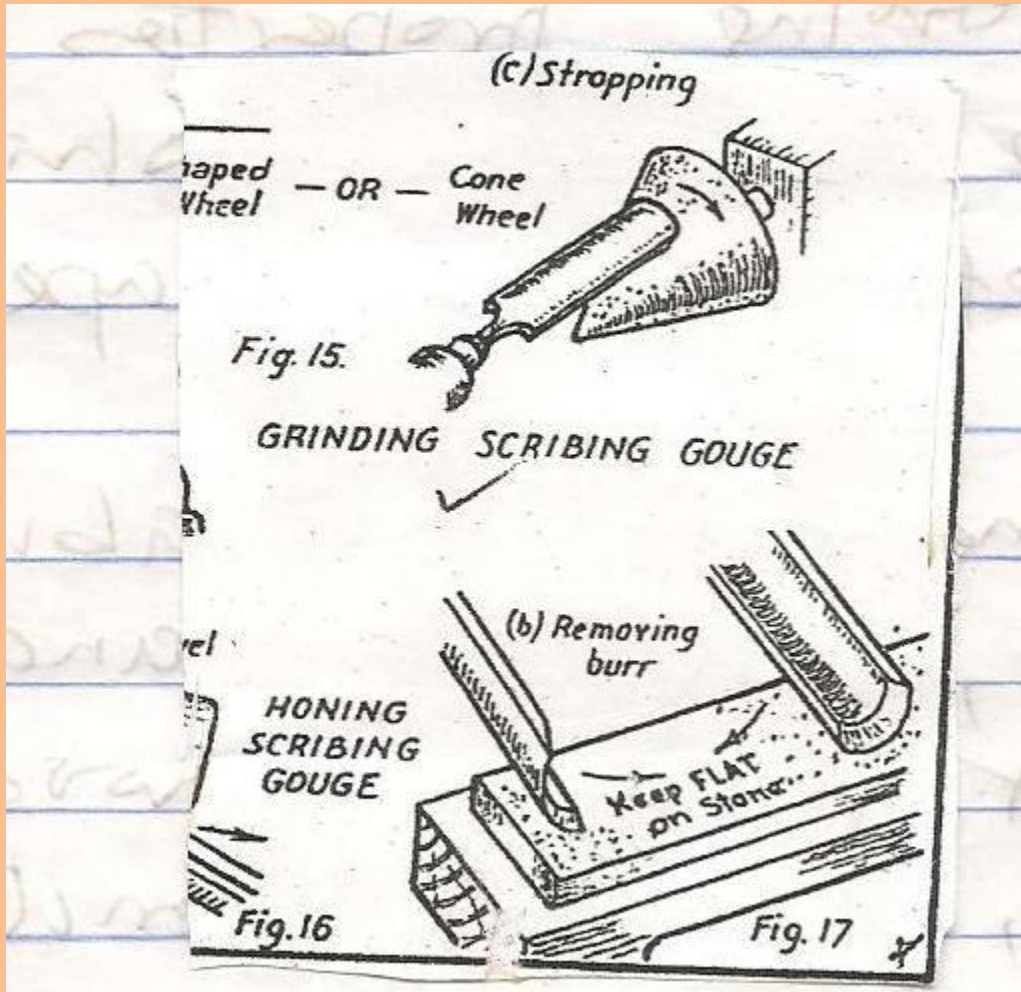
Uses: - A metal rebate plane intended for use on work demanding a high finish. It is used in trimming the shoulders of hardwood terons which are required to fit very accurately.

3b. BLOCK PLANE



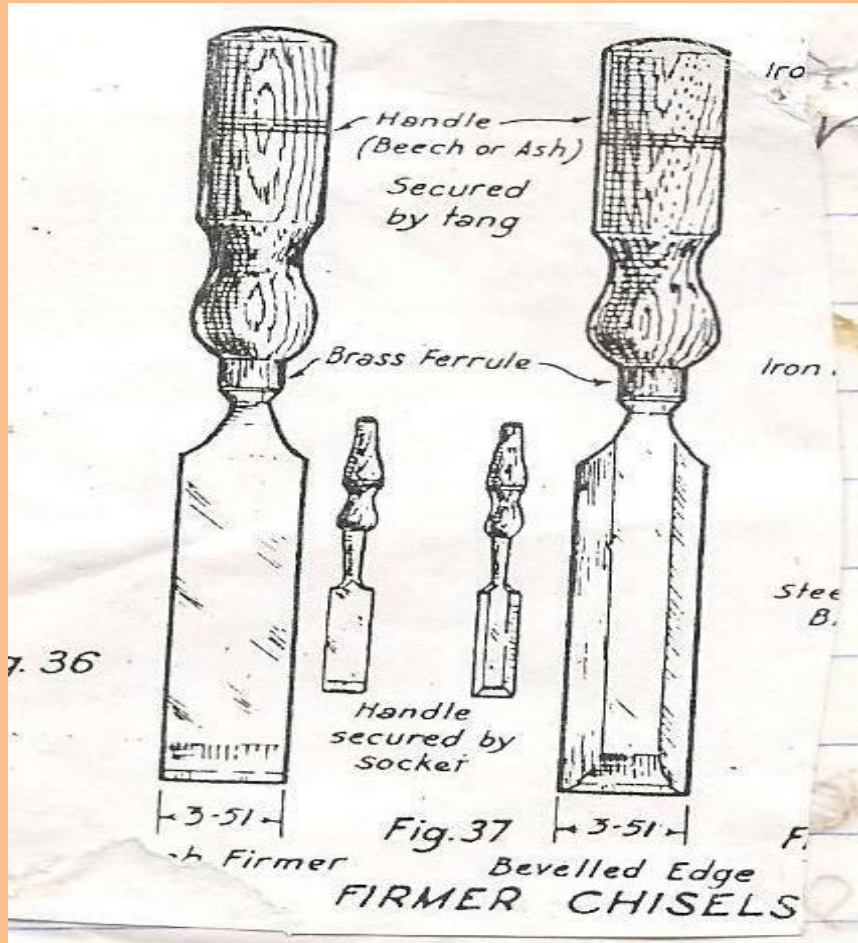
Uses:- for plain end grains e.g. finishing small mitres and for planing small chainfers, especially across the grain.

3c. GRINDING SCRIBING GOUGE



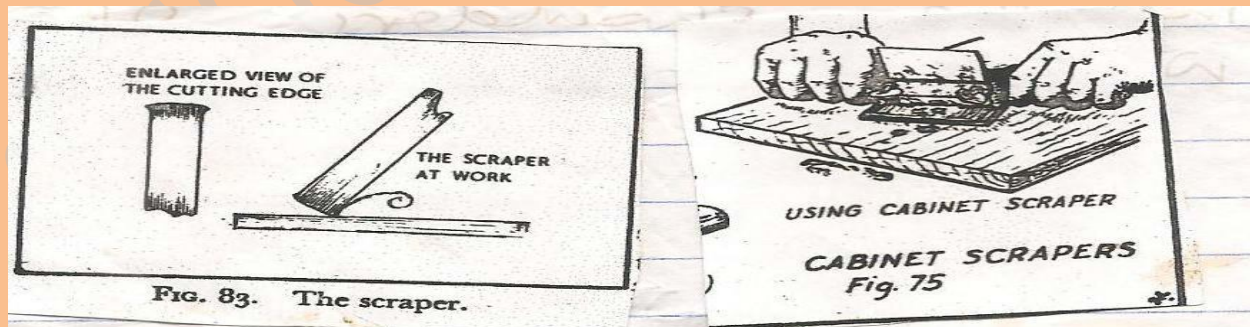
Uses: - It is used for contour work where hollow or concave curves are required.

3d. flimer chisel:-



Uses: For general chiseling purposes. Being fairly strongly made it can be used for light chiseling with a mallet.

3e. Cabinet scraper.



Uses: - it is used in the finishing of hardwood, being particularly useful on short grain where there is danger of tearing the surface with even a very finely adjusted smoothing plane.

4. Explain the following properties of timber?

4a. Elasticity: - The property which enables the wood to return to shape after bending.

b. Hardness or Strongness :- The ability to resist indentation, bruising and abrasion.

c. Durability: - Ability of wood to resist decay, bores, termites and weathering.

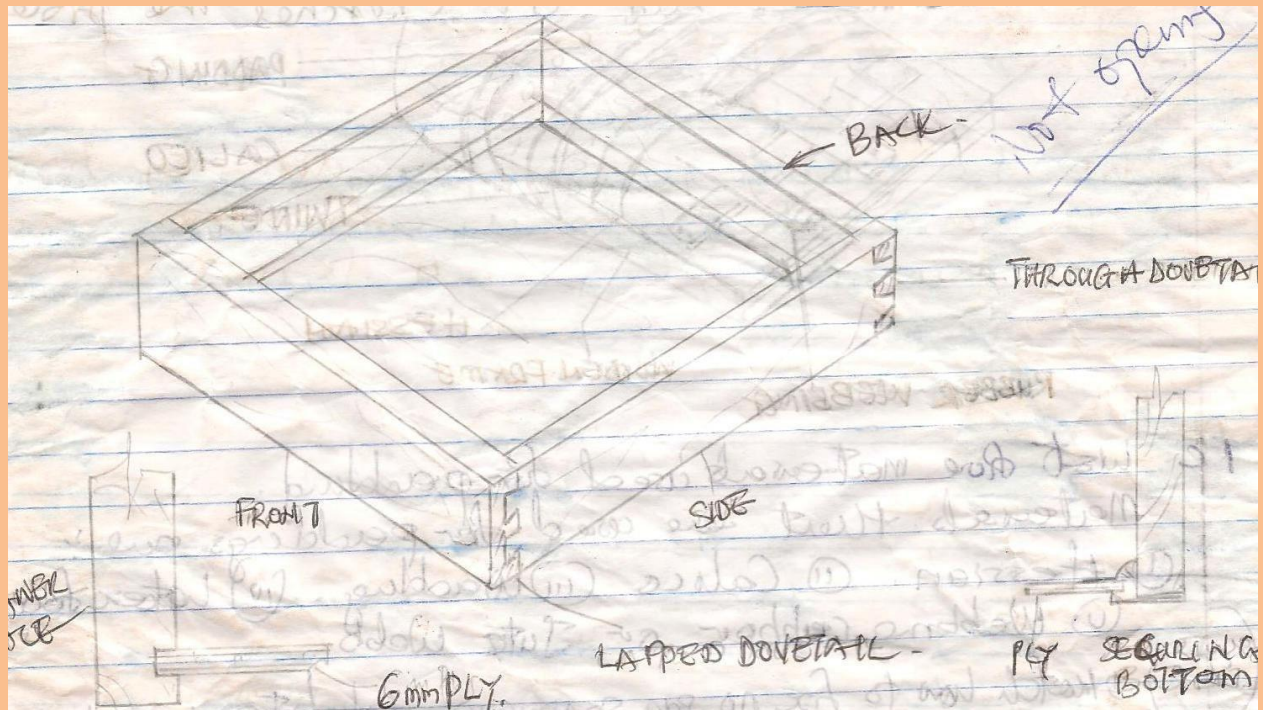
d. Toughness; - The ability of wood to resist shocks without breaking e.g tool handles.

Stiffers' strength:- Ability of timber to resist bending when loads applied.

5a. Explain with the aid of sketches the process of constructing a drawer with lap and through dovetail joints.



5b. The process of constructing a drawer with lap and through dovetail joint.



The processes of drawer construction have four steps which are:

- (a) Preparation of the member parts
- (b) Setting out of parts
- (c) Cutting at the joints
- (d) Fixed assembling.