Module 2: ORTHOGRAPHIC PROJECTIONS

Objectives

- Learn basics of orthographic projections.
- First angle projection
- Projection of points and lines

Basics

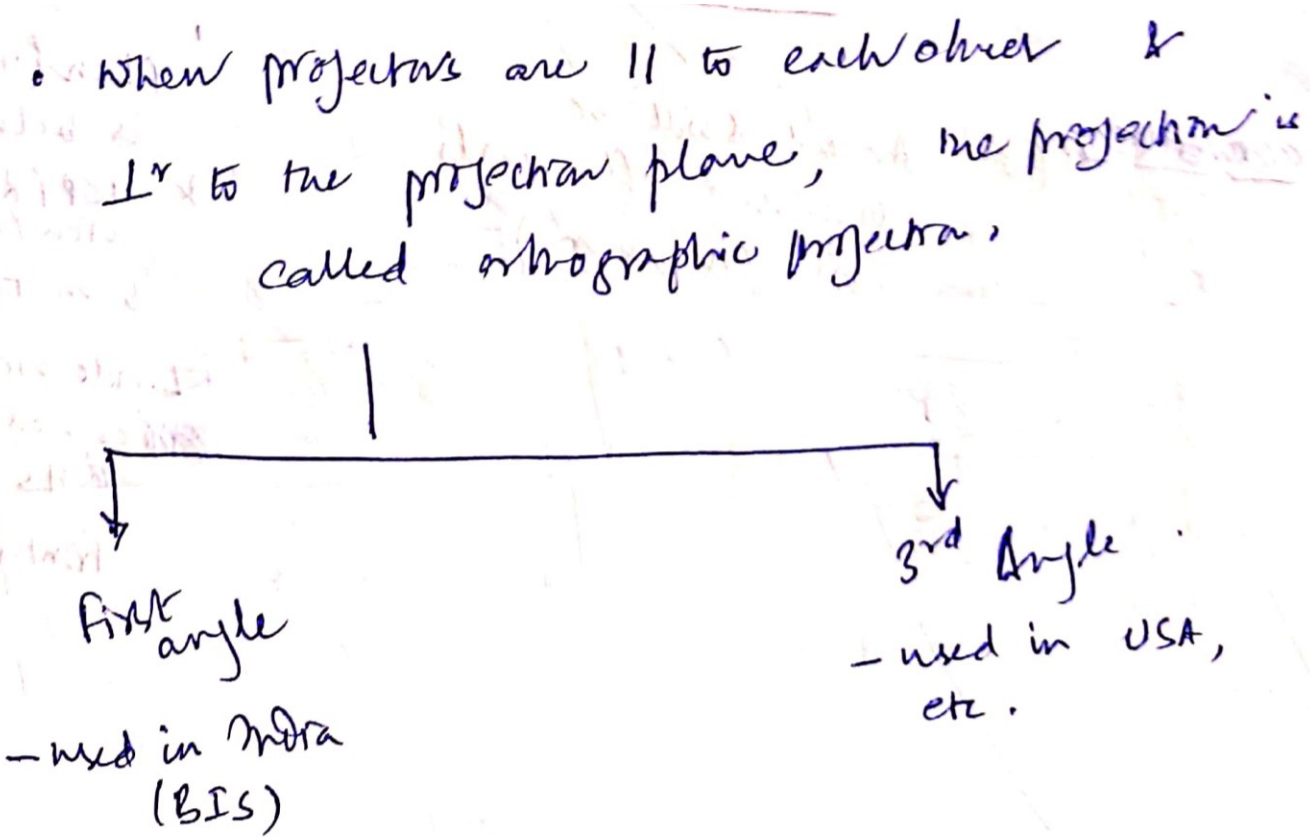
method of projection.

- orthographic
  - 3D object is represented by 2 or 3 views on mutually ⊥r projection plane.
  - each view represents 2 dimensions of an object.
- isometric, perspective, etc.
  - (pictorial view as eye see it.)
  - represented by a single view only.

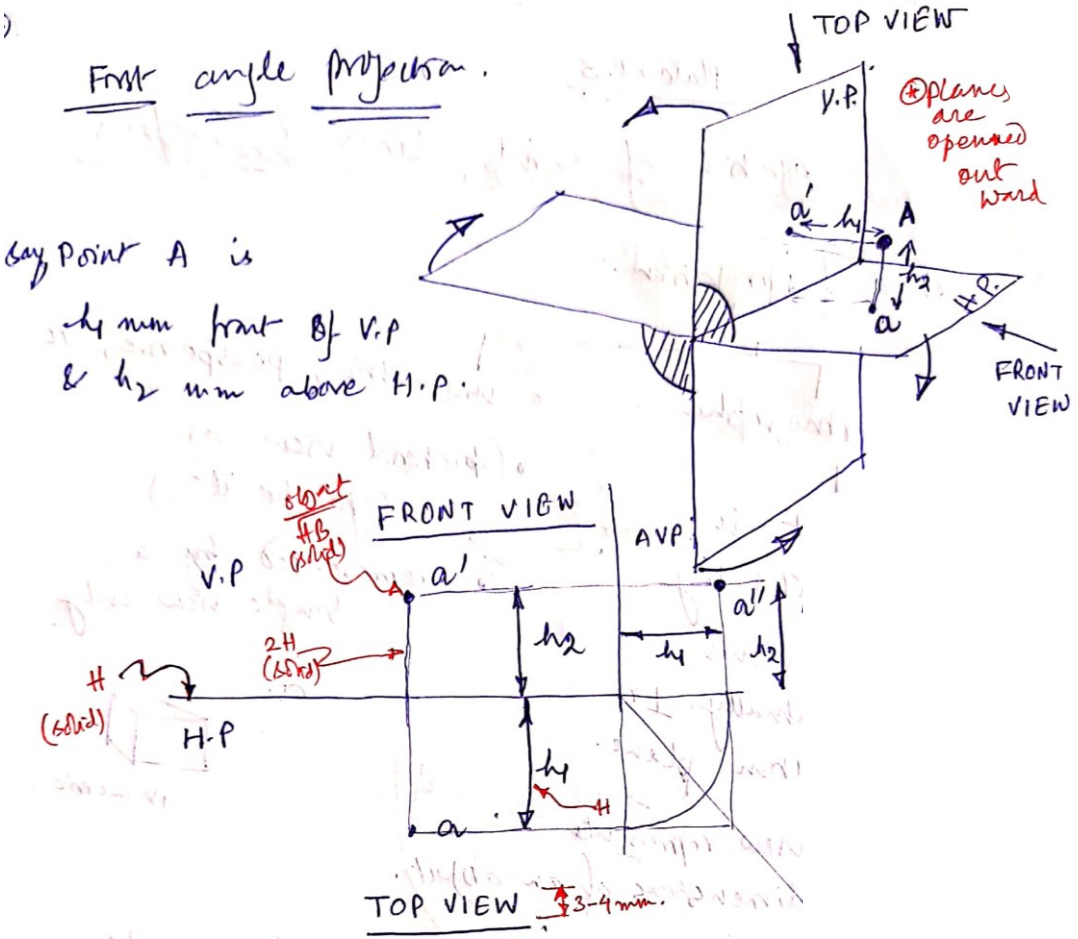
eg.

isometric.

ORTHOGRAPHIC PROJECTIONS



ORTHOGRAPHIC PROJECTIONS

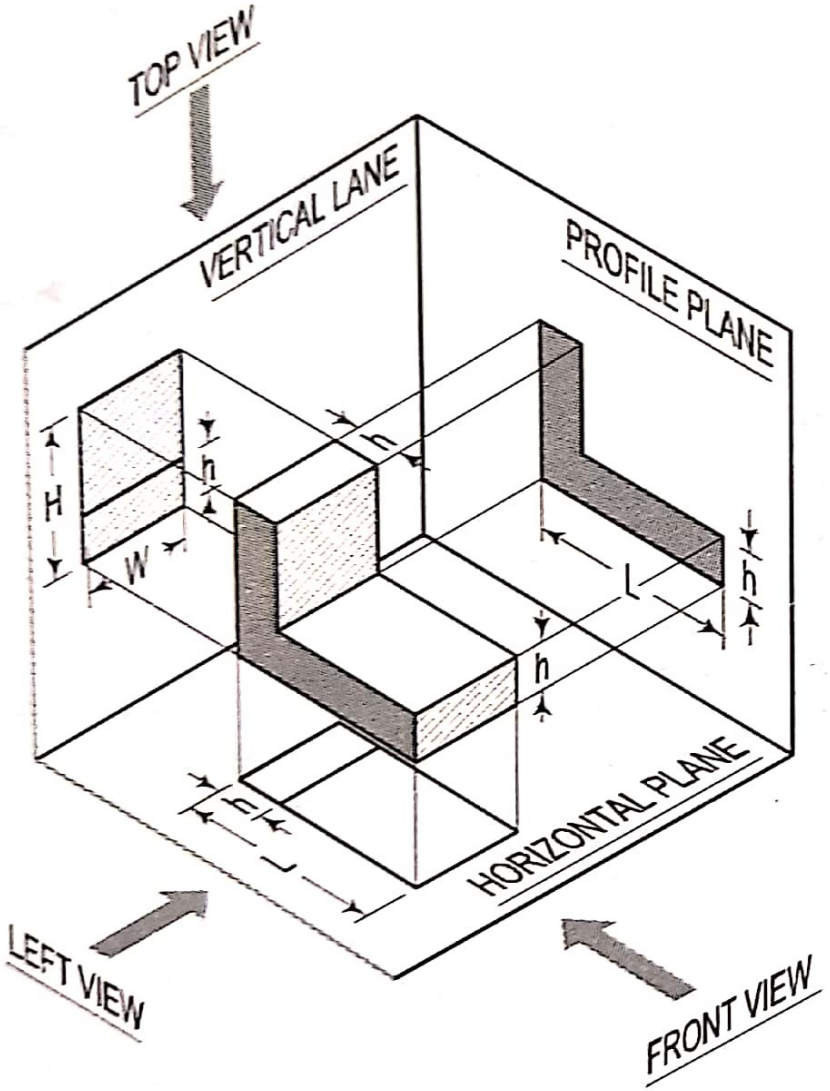


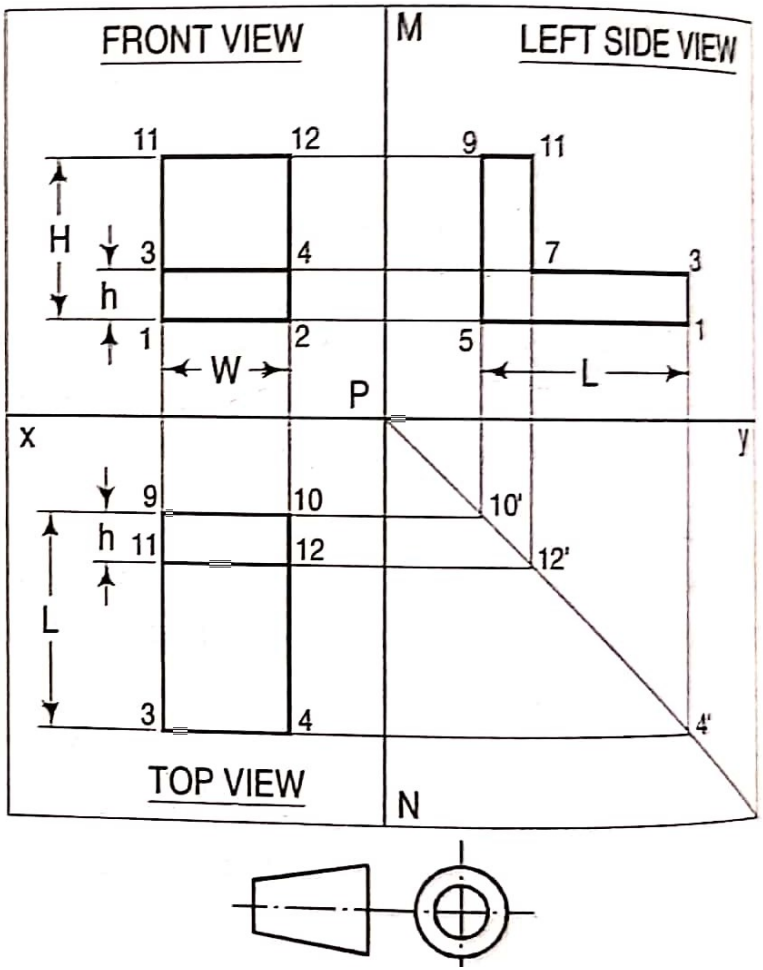
(3rd Angle ~~s~~ will be discussed afterwards to avoid confusion.)

Features:

- object is in 1st Quadrant
- planes are opaque
- object lies between observer & plane of projection
- Plan (TOP view) is below GL & FRONT view (elevation) is on TOP
- L side view comes on RHS of Front view.

ORTHOGRAPHIC PROJECTIONS





PROJECTIONS OF LINES

https://www.youtube.com/watch?v=mStD1NN42tE

https://www.youtube.com/watch?v=MSg7DpKgaK8

https://www.youtube.com/watch?v=wzxAFXejjw8

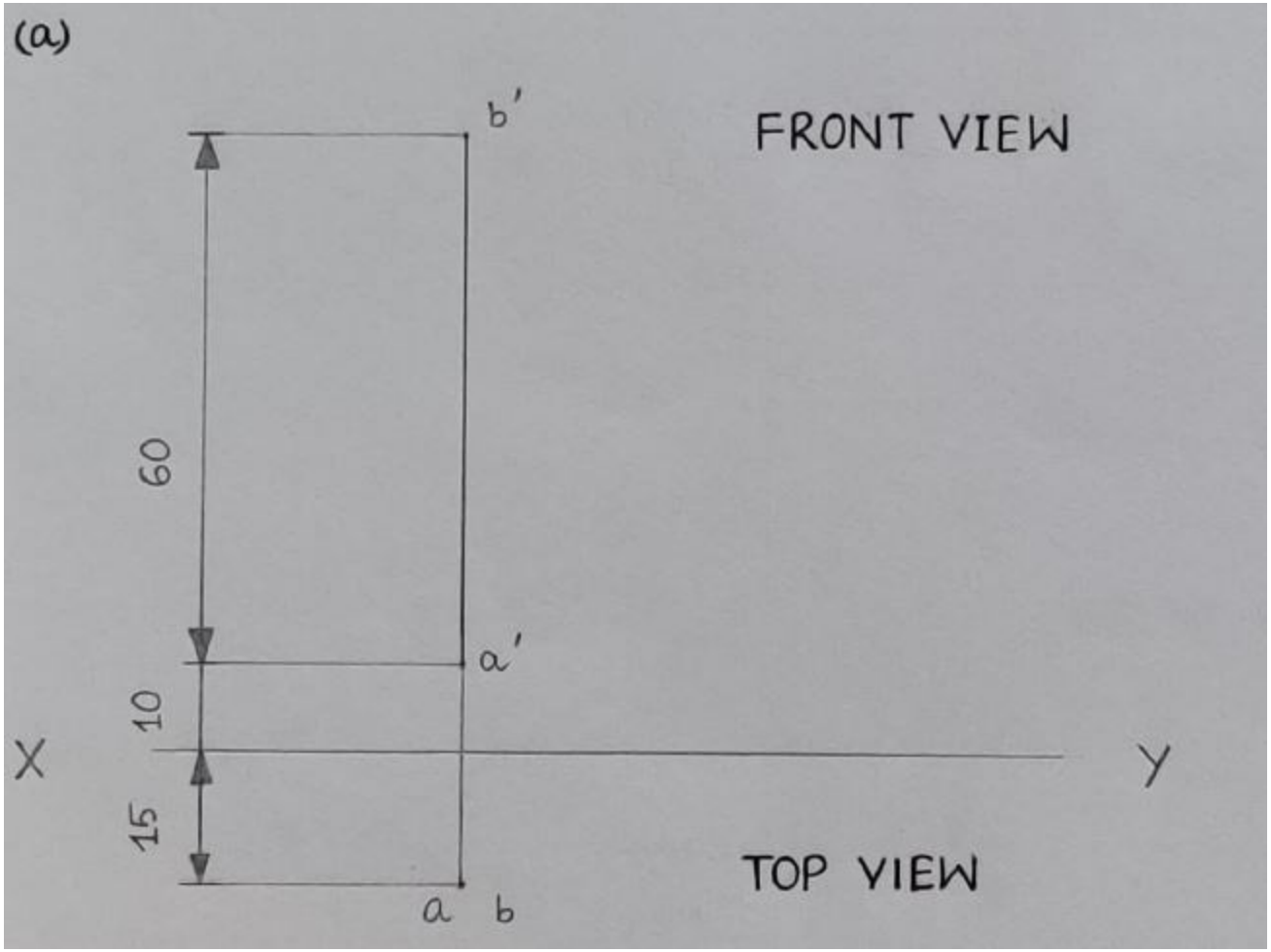
Assignment#2

A line AB is of length 60 mm. The end A is 10 mm above HP and 15 mm in front of VP. Draw plan and elevation of the line when it is — a) parallel to VP and perpendicular to HP, b) parallel to HP and perpendicular to VP, c) parallel to both HP and VP, d) parallel to VP and inclined to HP at 30°, e) parallel to HP and inclined to VP at 45°, f) inclined to HP at 30° and to VP at 45°.

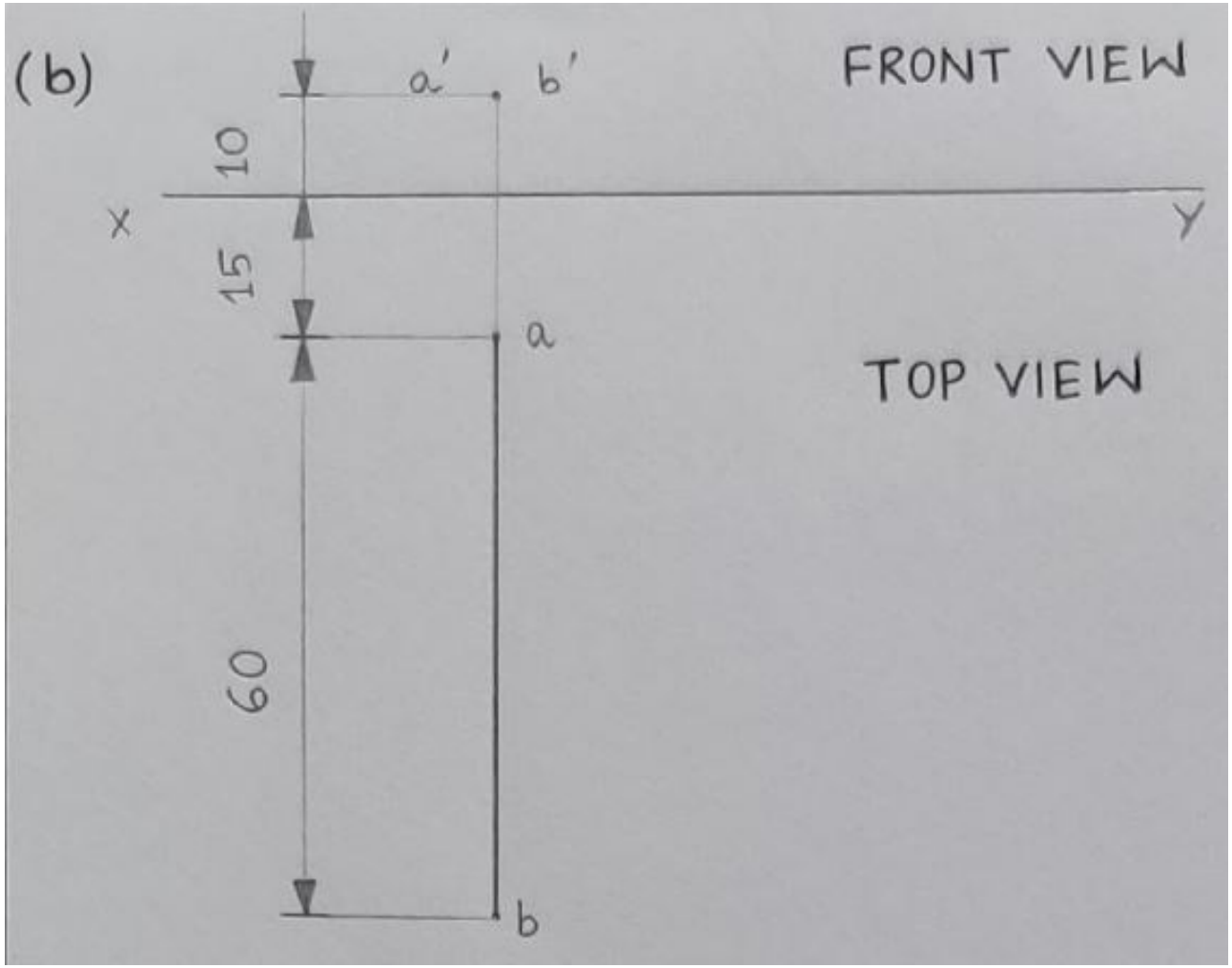
Also mention values of apparent inclinations for question no. f)

Last date of submission: 13 Jan 2022

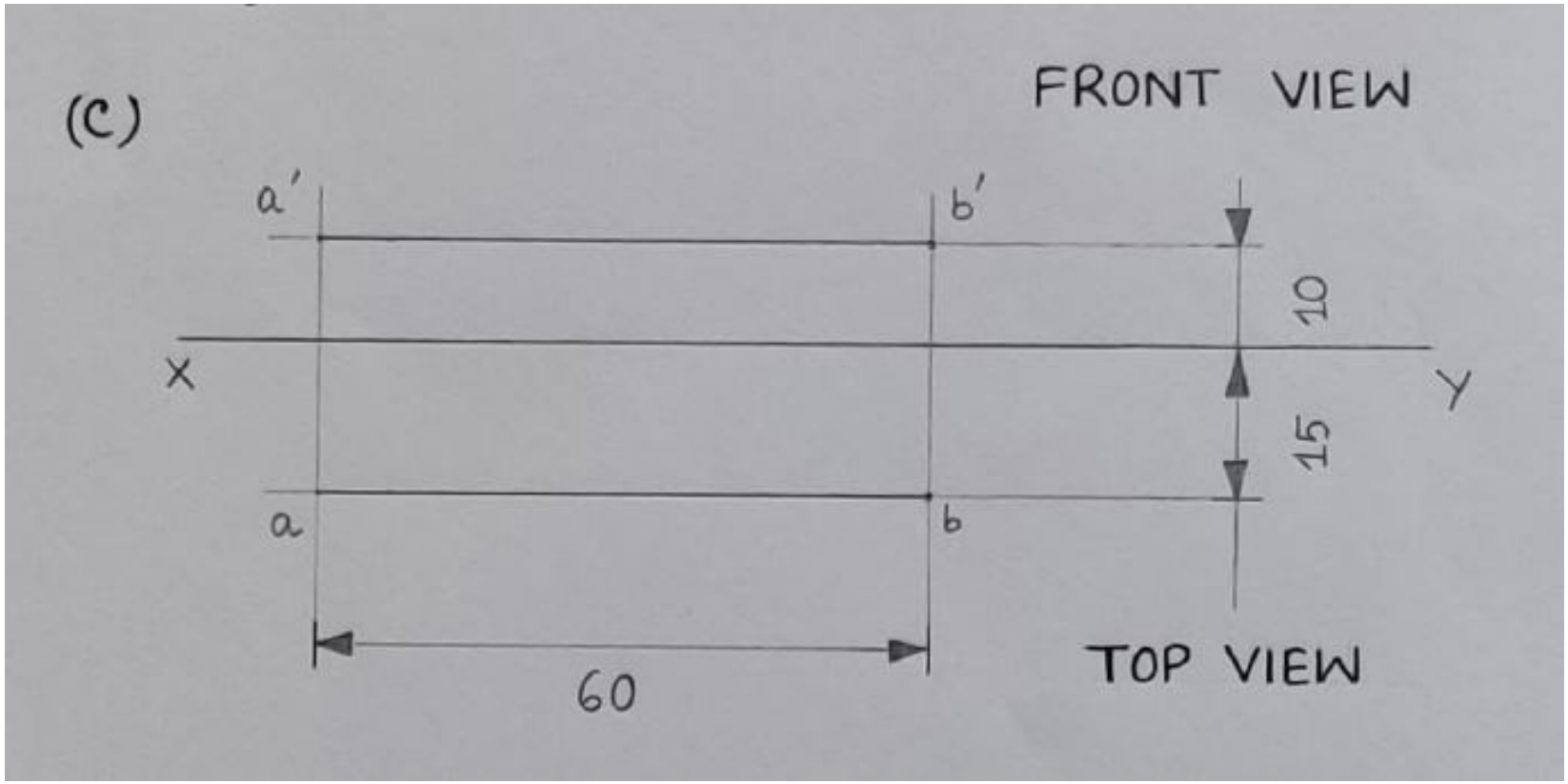
Assignment#2 : solution



Assignment#2 : solution



Assignment#2 : solution



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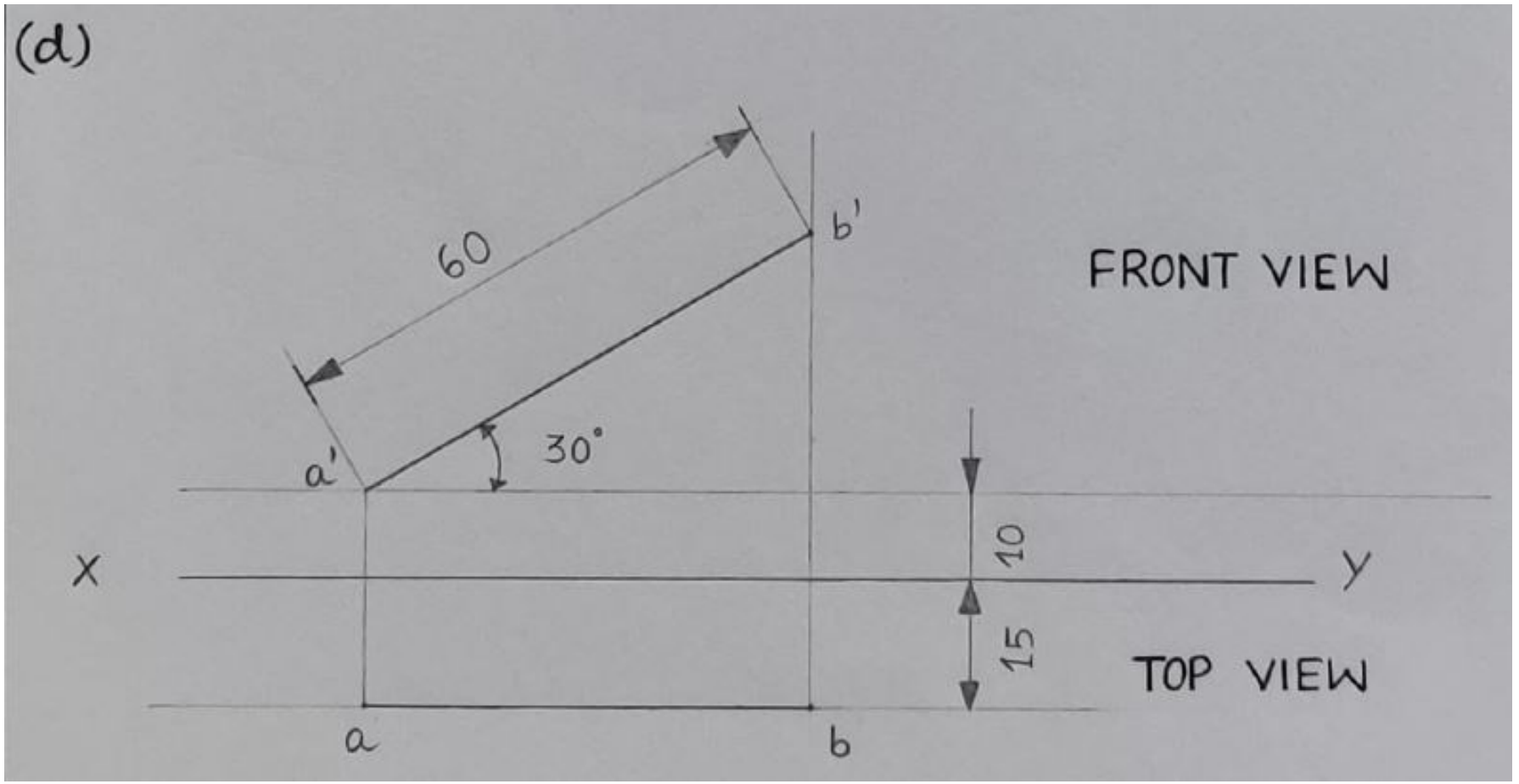
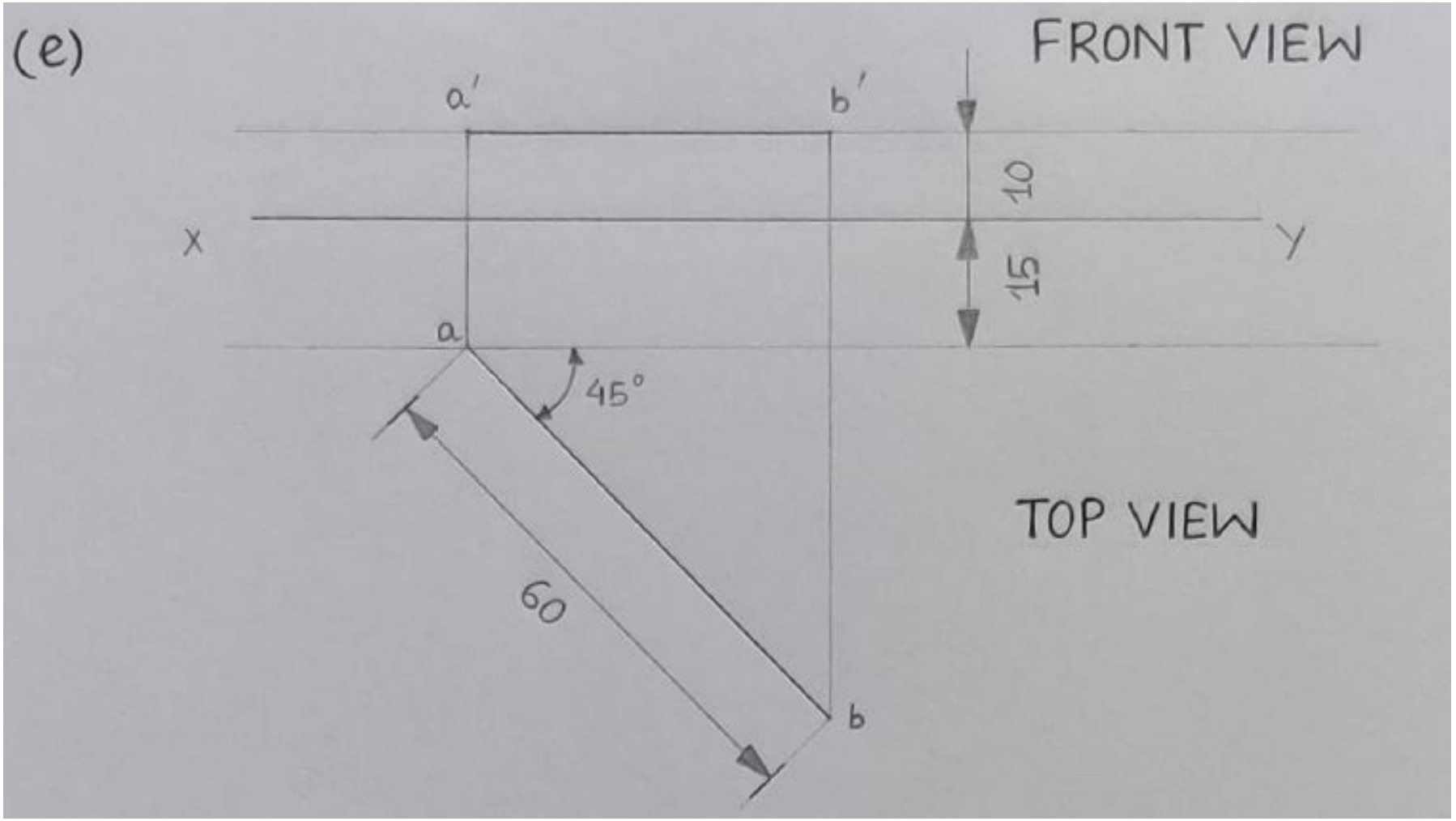


Assignment#2 : solution



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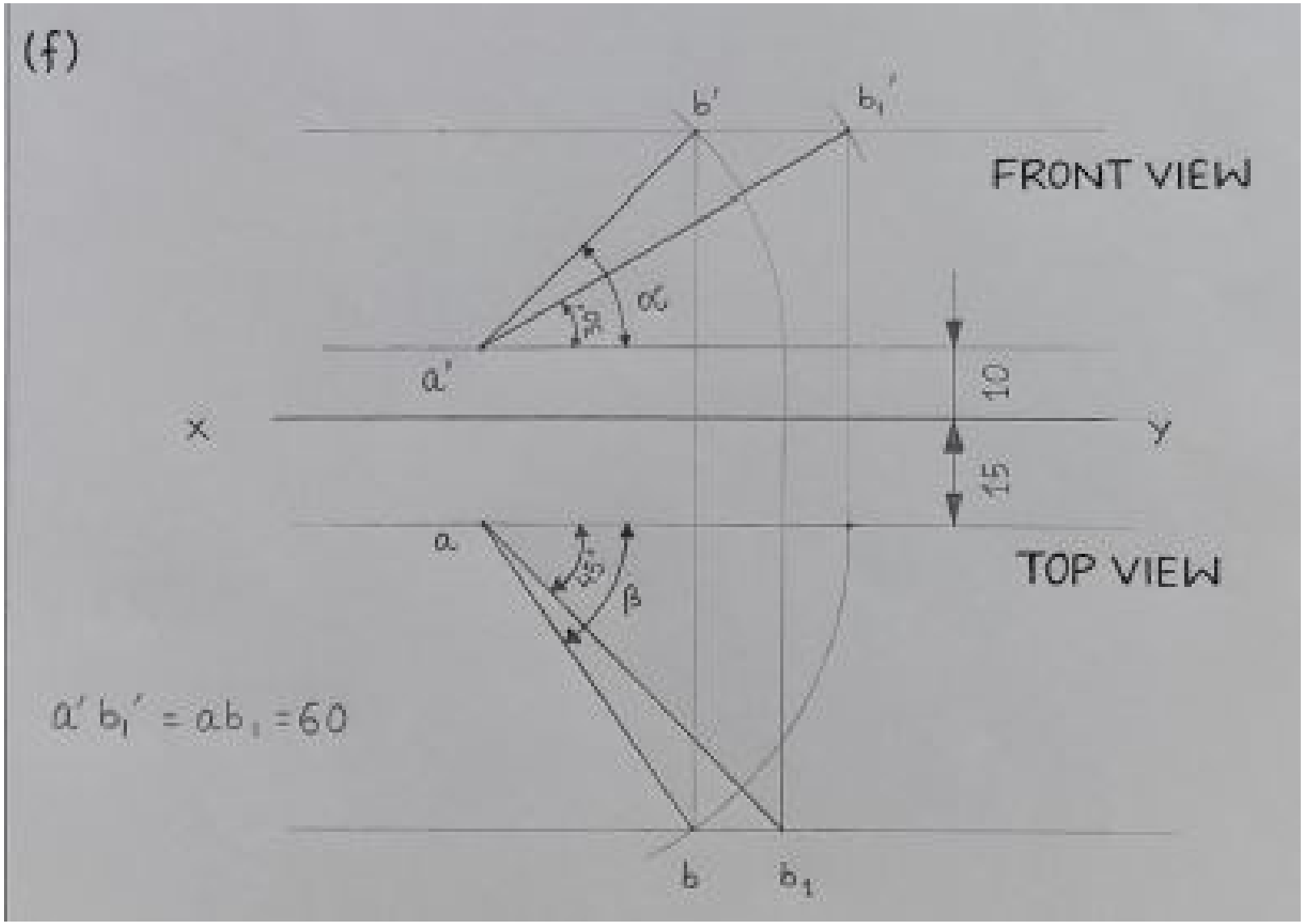
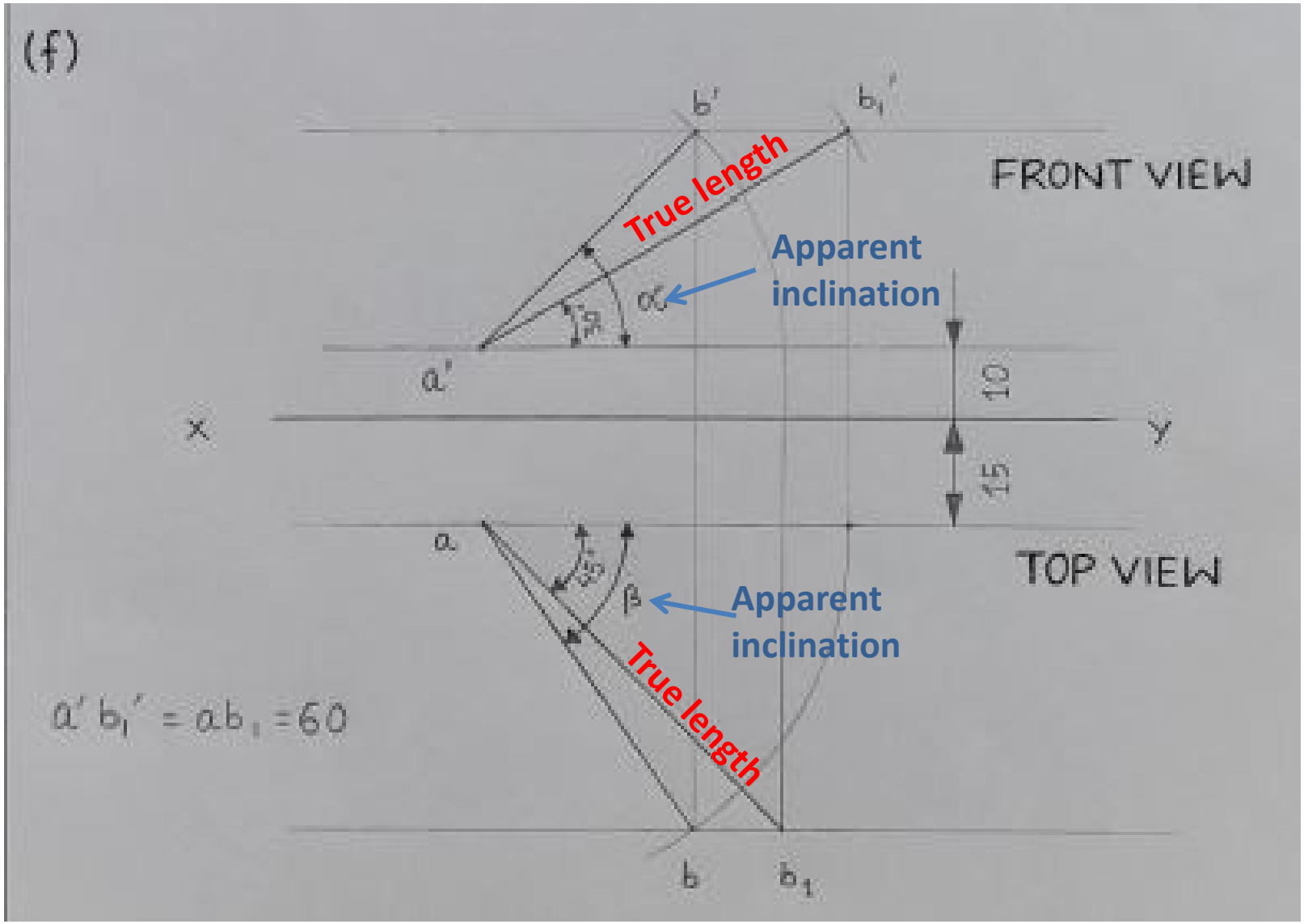


Assignment#2 : solution



*mention values of apparent inclinations in your answer for Qn.# (f)