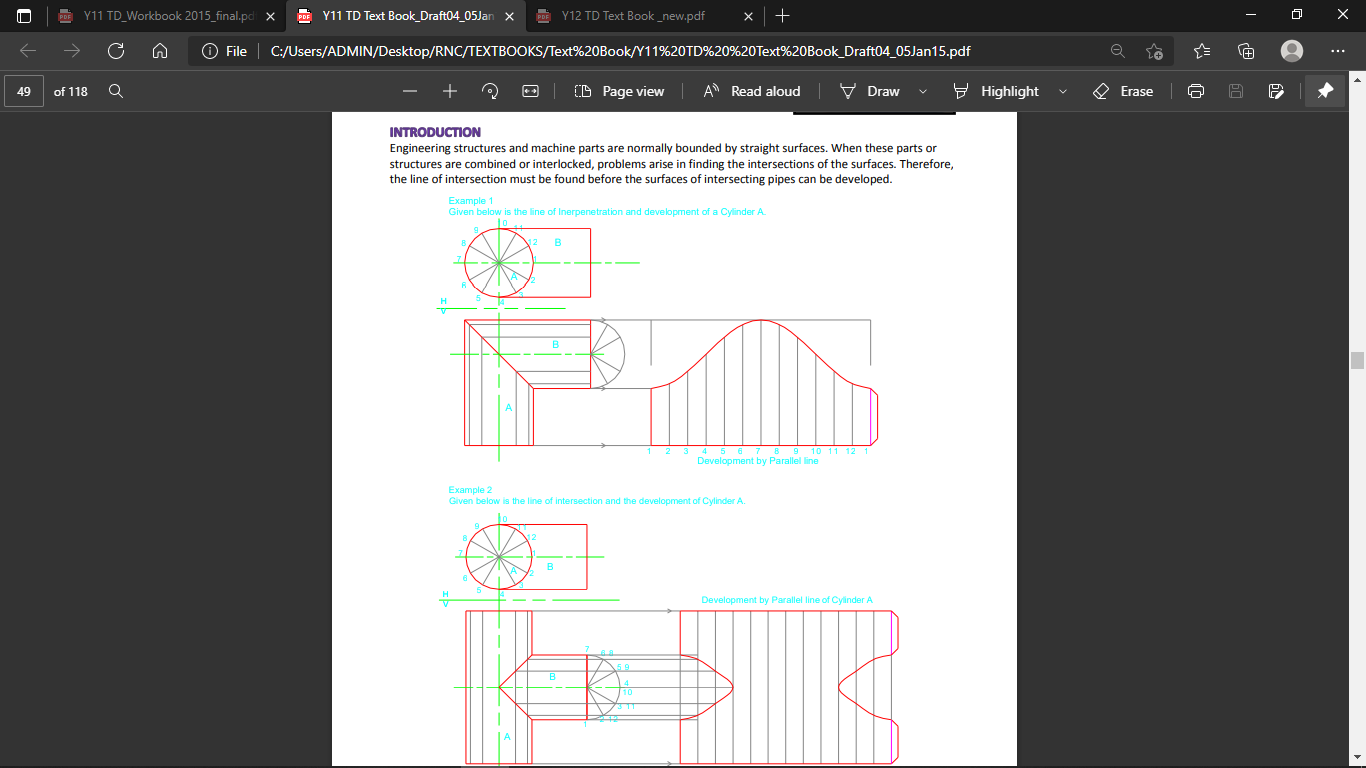
**WEEK 7 YEAR 11 TECHNICAL DRAWING**

**STRAND: GEOMETRY**

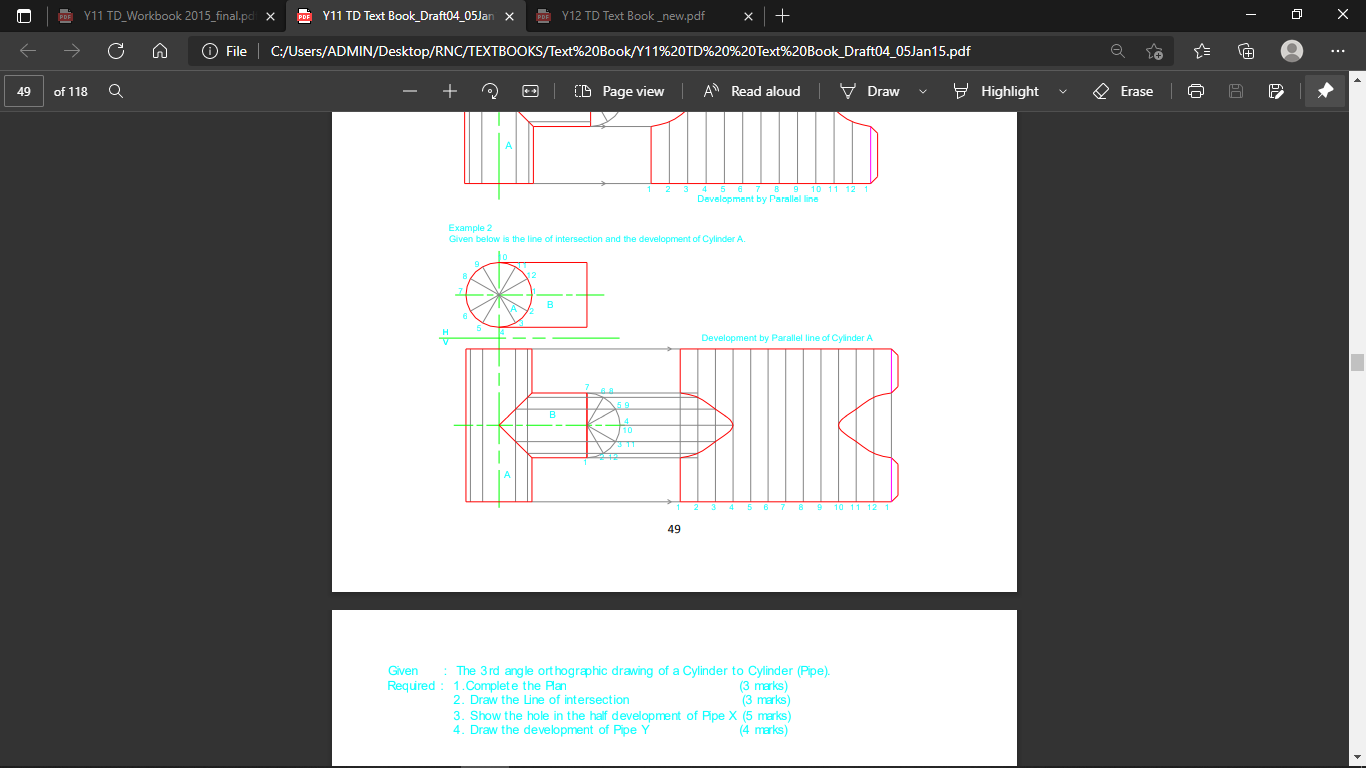
**LESSON 31: INTERPENETRATION-EQUAL CYCLINDER**

**LEARNING OUTCOME: CONSTRUCT THE DEVELOPMENT OF CYCLINDER A**

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**LESSON 32: INTERPENETRATION-EQUAL CYCLINDER**

**LEARNING OUTCOME: CONSTRUCT THE DEVELOPMENT OF CYCLINDER B**

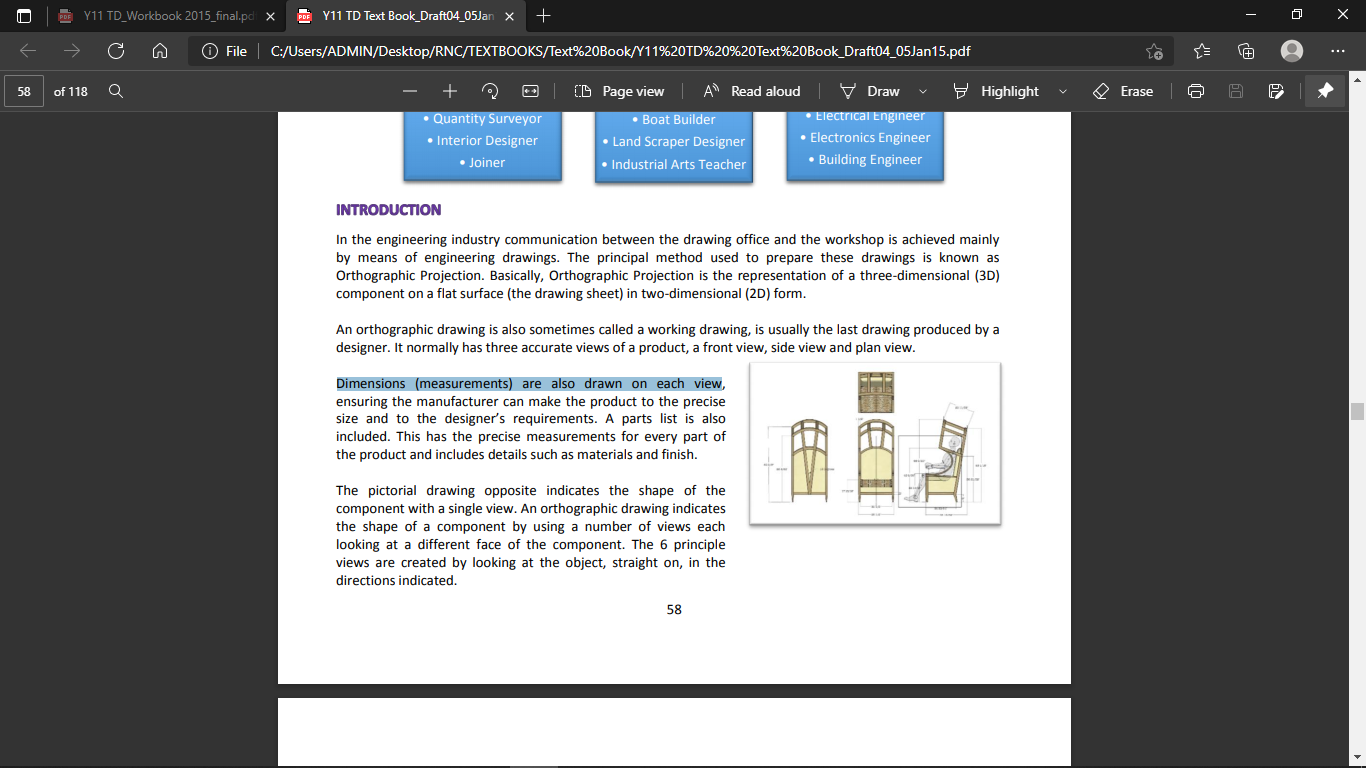
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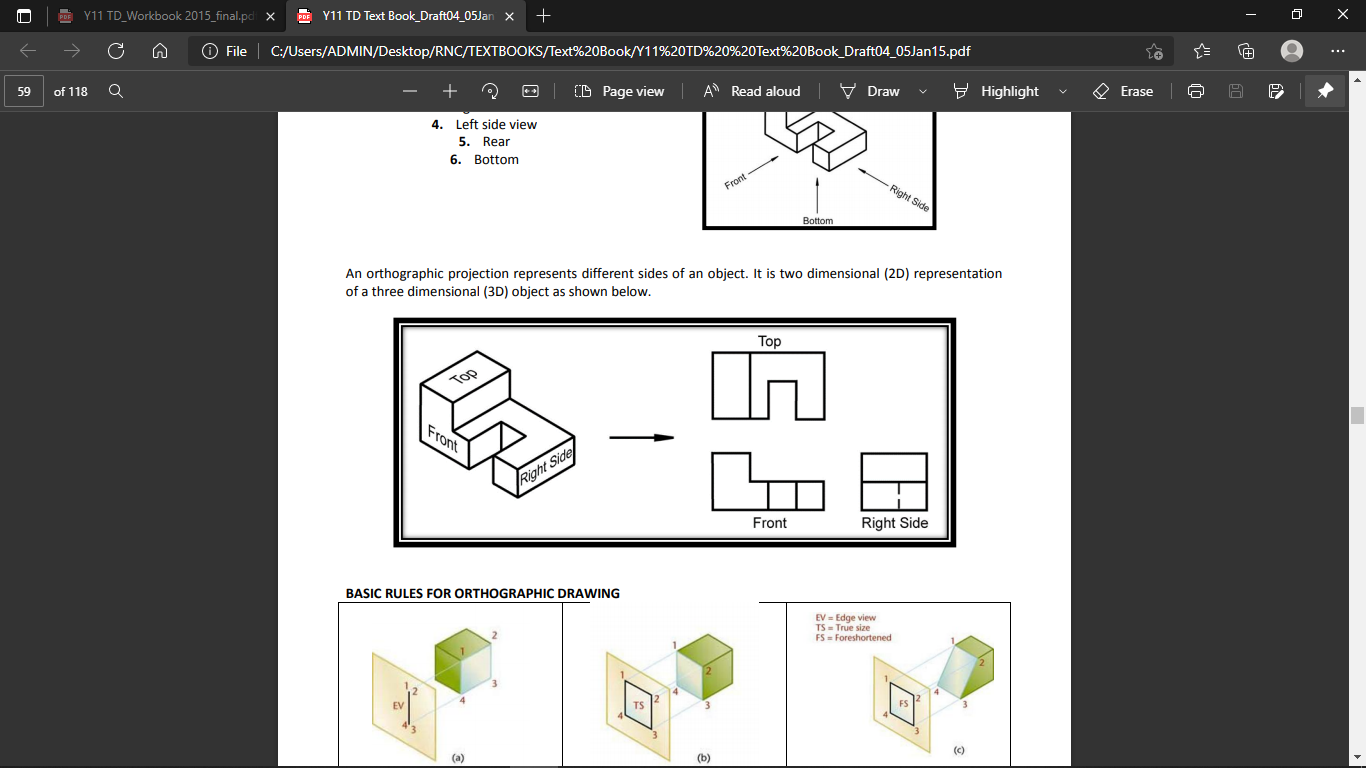
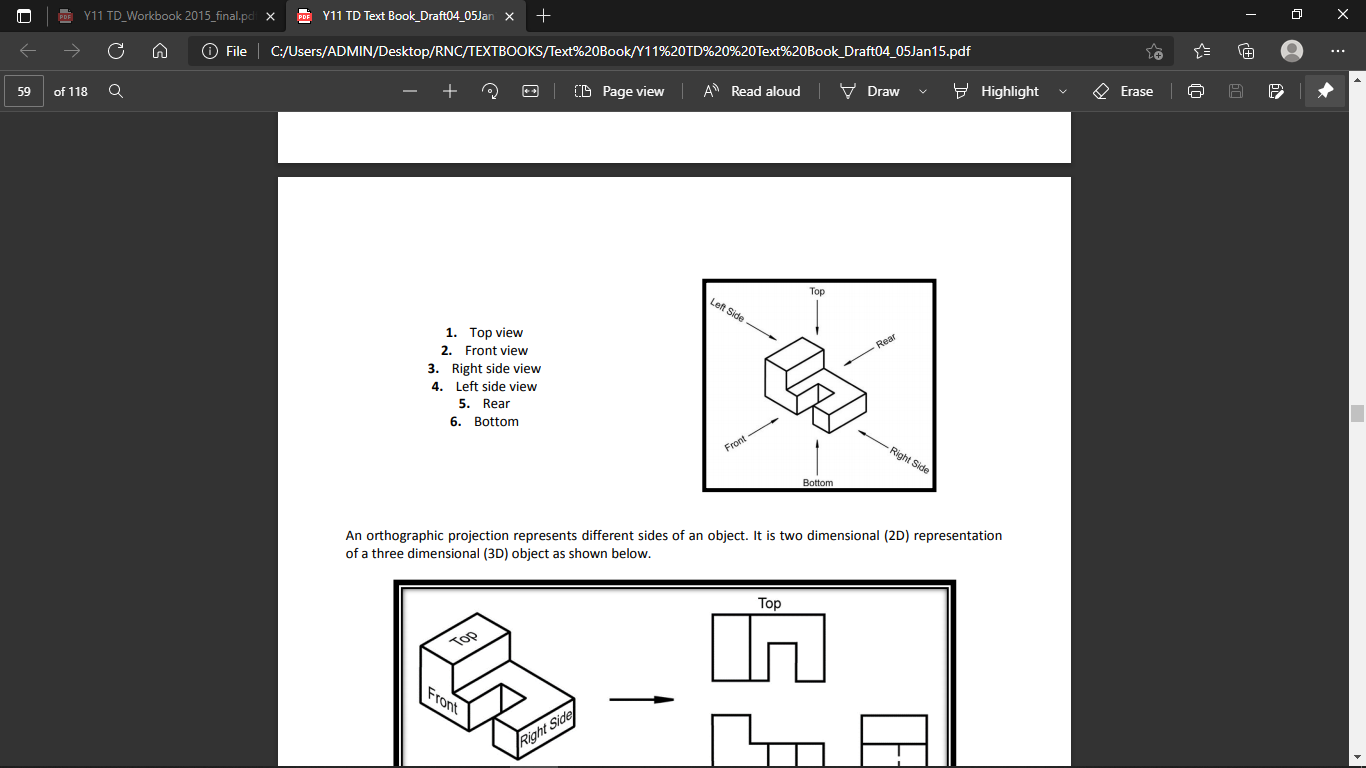
**STRAND: APPLIED DRAWING**

**LESSON 33: ORTHOGRAPHIC DRAWING**

**LEARNING OUTCOME: DEFINE ORTHOGRAPHIC DRAWING**

* Orthographic Projection is the representation of a three-dimensional (3D) component on a flat surface (the drawing sheet) in two-dimensional (2D) form.
* An orthographic drawing is also sometimes called a working drawing, is usually the last drawing produced by a designer.
* It normally has three accurate views of a product, a front view, side view and plan view.
* Dimensions (measurements) are also drawn on each view

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**LESSON 34: ORTHOGRAPHIC DRAWING- BASIC RULES**

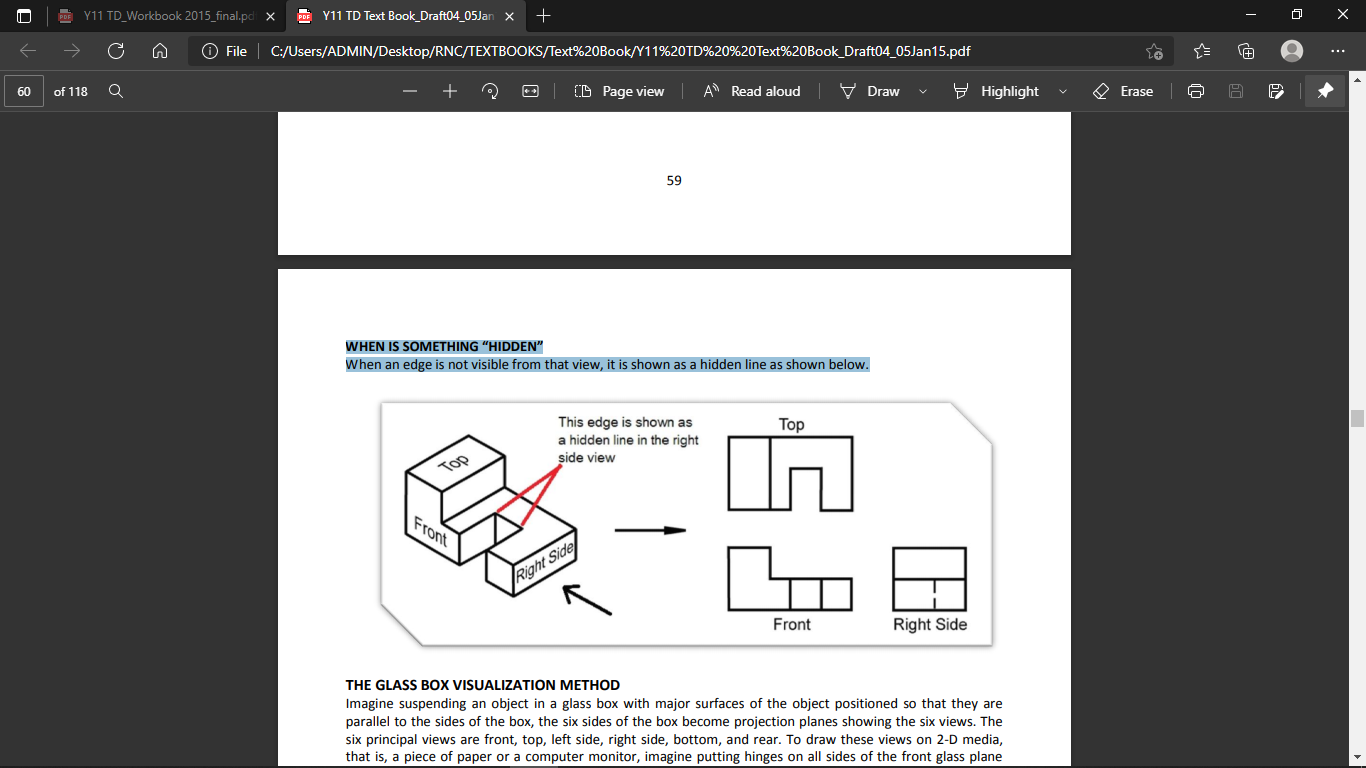
**LEARNING OUTCOME: IDENTIFY THE BASIC RULES OF ORTHOGRAPHIC DRAWING**

1. BASIC RULES OF ORTHOGRAPHIC DRAWING

|  |  |  |
| --- | --- | --- |
|  |  |  |
| A plane surface that is perpendicular to a plane of projection appears on edge as a straight line | A plane surface that is parallel to a plane of projection appears as rectangle at true size | If a plane is angled to the plane of projection, it appears foreshortened 2 to 3 in projected plane is not equal to 2 to 3 measured on object |

1. WHEN IS SOMETHING “HIDDEN”

* When an edge is not visible from that view, it is shown as a hidden line as shown below.

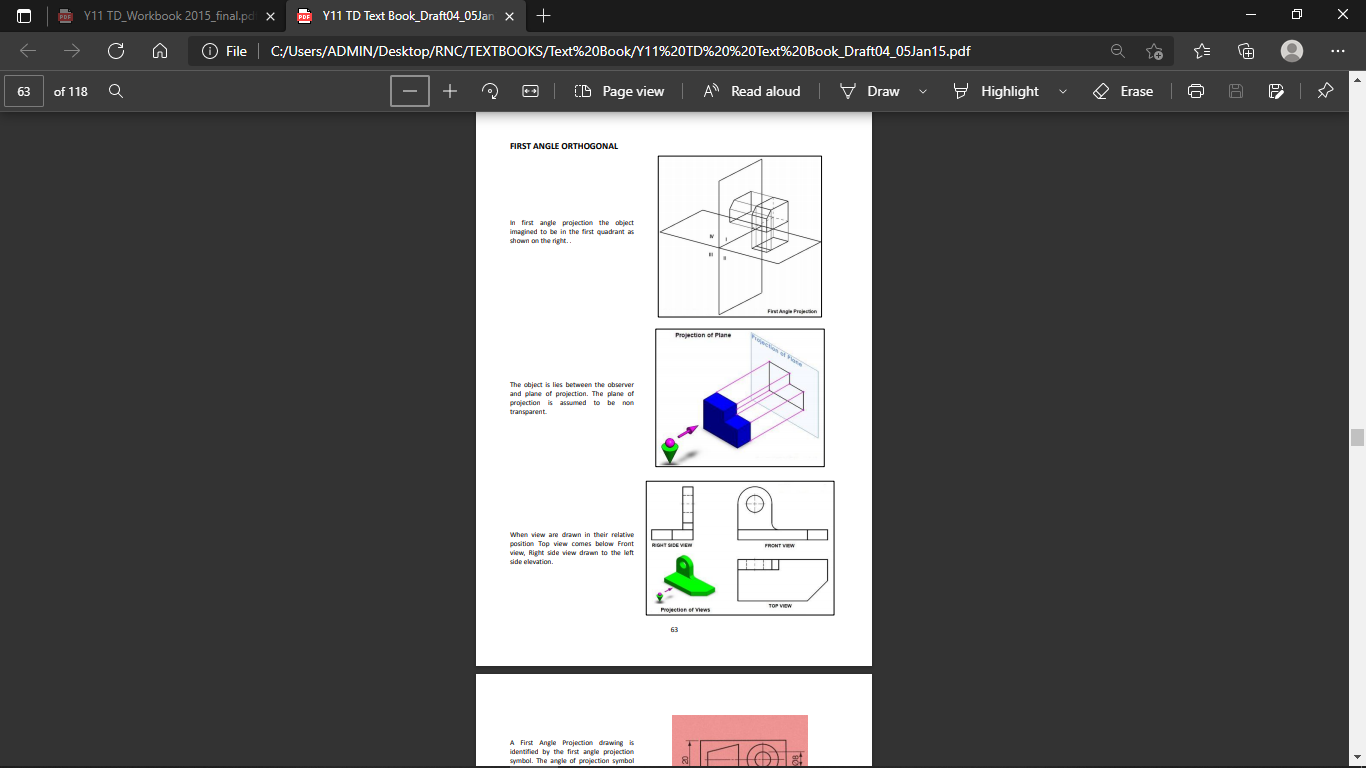


**LESSON 35: ORTHOGRAPHIC DRAWING- FIRST ANGLE ORTHOGONAL**

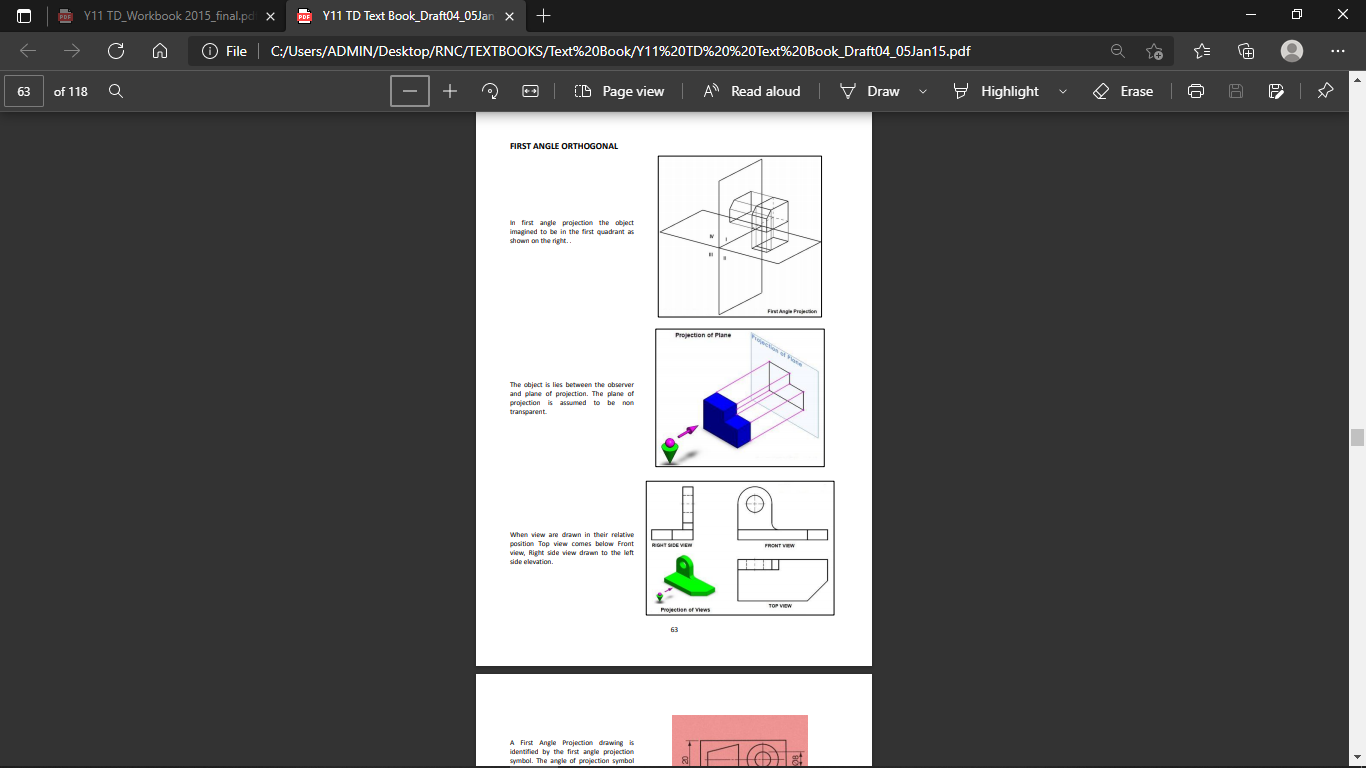
**LEARNING OUTCOME: DRAW IN FIRST ANGLE ORTHOGRAPHIC DRAWING**

1. FIRST ANGLE ORTHOGRAPHIC DRAWING

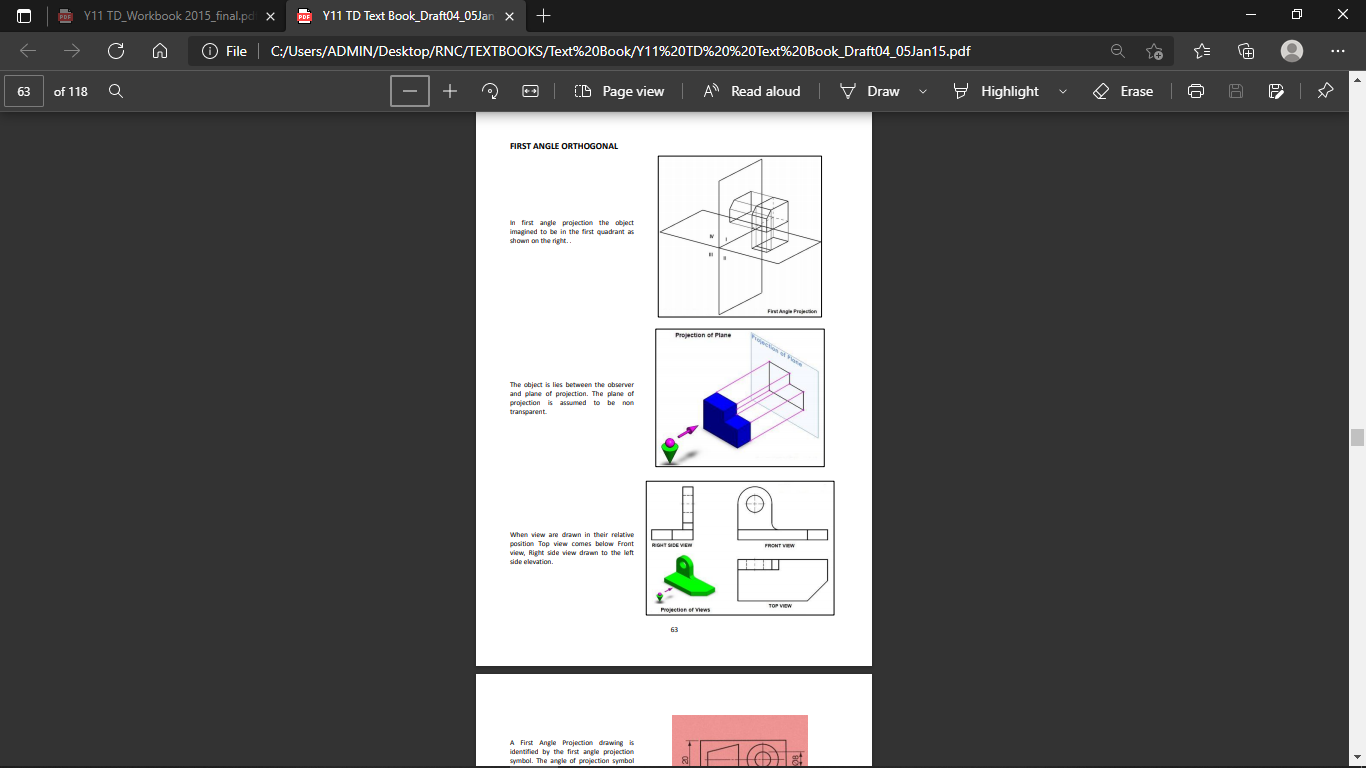
* In first angle projection the object imagined to be in the first quadrant as shown on the right.



* The object is lies between the observer and plane of projection. The plane of projection is assumed to be non transparent.



* When views are drawn in their relative position; Top view comes below Front view, Right side view drawn to the left side elevation.



* A First Angle Projection drawing is identified by the first angle projection symbol. The angle of projection symbol typically appears in angle of projection block near to Title block.

