AIM: What are the essential tools used for drafting?

DO NOW:
IN YOUR NOTEBOOK—

EXAMINE THE FOUR TOOLS YOU HAVE ON YOUR DESK AND ANSWER THE QUESTIONS BELOW IN FULL SENTENCES

1) WHAT DO YOU THINK EACH TOOL IS USED FOR AND WHY DO YOU THINK IT IS USED FOR THAT PURPOSE?

2) QUICKLY SKETCH A PICTURE OF EACH TOOL
Drafting Paper

- Drafting paper comes in a variety of materials and surface finished.

- Drawings may be prepared on paper, vellum, or plastic film (commonly called by its trade name Mylar).

- Drafting paper, vellum, and film can be purchased in sheets or rolls.

- Vellums and drafting films (Mylar) are see through material.
Drafting Pencils
A **T-Square** is a technical *drawing instrument* used by draftsperson.

- It is first used to align the drafting paper on the drafting board or table.
- It is often used as a guide for drawing horizontal lines.
- It may also guide a triangle to draw vertical or diagonal lines.
- Its name comes from the general shape of the instrument where the horizontal member of the T slides on the side of the drafting table.
T-Square

Make paper parallel to the table by lining the edge of the paper up with the edge of the T-square.
Architectural Scale

- An **architect's scale** is a specialized **ruler** designed to facilitate the drafting and measuring of **architectural drawings**, such as **floor plans** and **orthographic projections**.

- Because the **scale** of such drawings are often smaller than life-size, an architect's scale features multiple **units of length** and proportional length increments.

- An **engineer’s scale** is similar to an architect’s scale *but it is used to draw much larger objects* like multiple city blocks.
Architectural Scale
A compass or pair of compasses is a technical drawing instrument that can be used for inscribing circles or arcs.

As dividers, they can also be used as a tool to measure distances, in particular on maps.

Compasses can be used for mathematics, drafting, navigation, and other purposes.
Drafting Compass
In geometry, a protractor is a circular or semicircular tool for measuring an angle or a circle.

The units of measurement utilized are usually degrees.

Some protractors are simple half-discs; these have existed since ancient times.

More advanced protractors, such as the bevel protractor, have one or two swinging arms, which can be used to help measure the angle.
Protractor
A **French curve** is a template made out of **metal**, **wood** or **plastic** composed of many different **curves**.

- It is used in drafting to draw smooth curves of varying radii.

- The curve is placed on the drawing material and a **pencil**, **knife**, or other implement is traced around its curves to produce the desired result.
French Curve
A drafting triangle is a precision drafting tool for drawing lines at specific angles.

In the field of architecture, angles are measured in degrees.

Common Type of Triangles:
- 30° 60° 90° Triangles
- 45° 45° 90° Triangles
- Adjustable Triangles
Triangles

45° 45° 90° 30° 60° 90°

Adjustable
Drafting Brush

- Used for cleaning debris off a drafting table or drafting board
Drafting Table / Drafting Board
Questions

- What is a T-Square first used for?
- What are two other uses for the T-Square?
- When is it better to use a protractor instead of a compass?
Summary

- What drafting tools can we use to create perfect circles?
- With what tool do we measure angles and what units are they measured in?
- What is the difference between a ruler and an architectural scale?