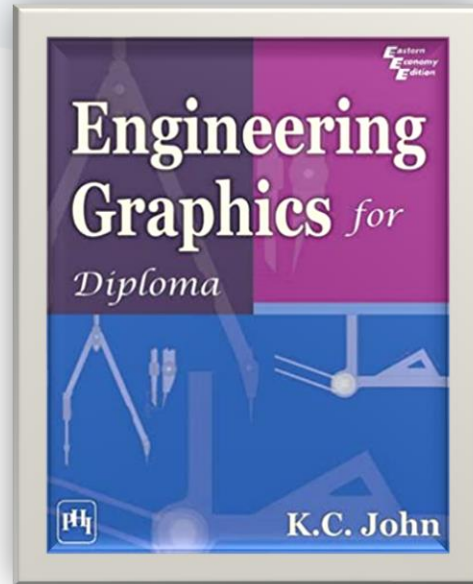




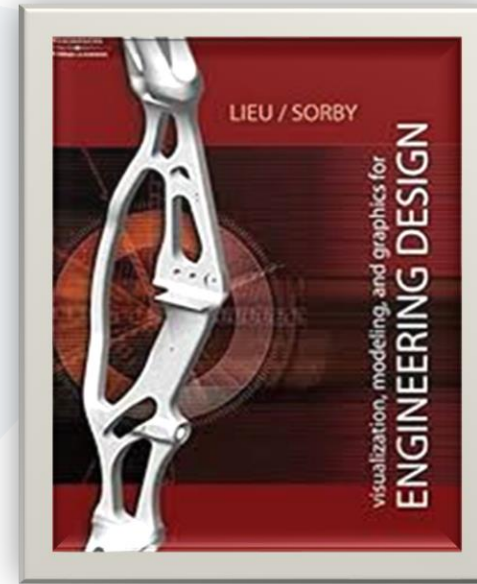
Industrial drawing

Chapter 1

Textbook & reference

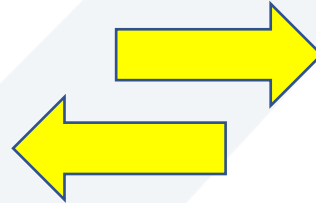


- Engineering graphics for diploma
- K.C. John
- New Delhi 2009



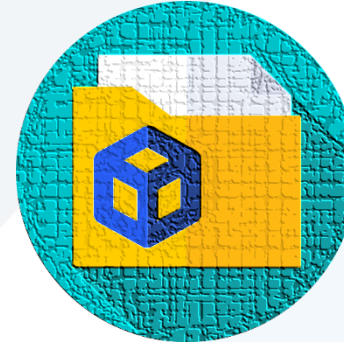
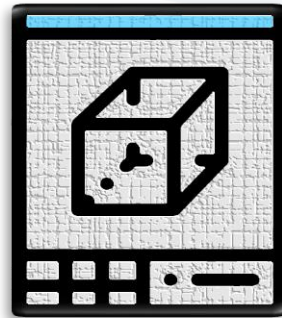
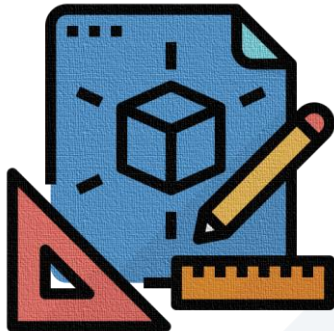
- Visualization , modeling, and graphics for engineering design
- LIEU / SORBY
- United states of America 2008

Industrial drawing concept

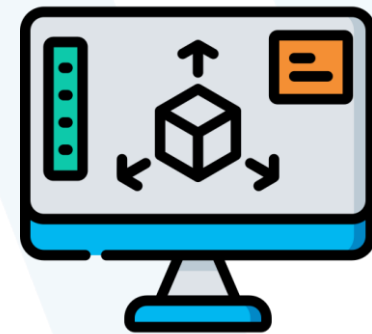


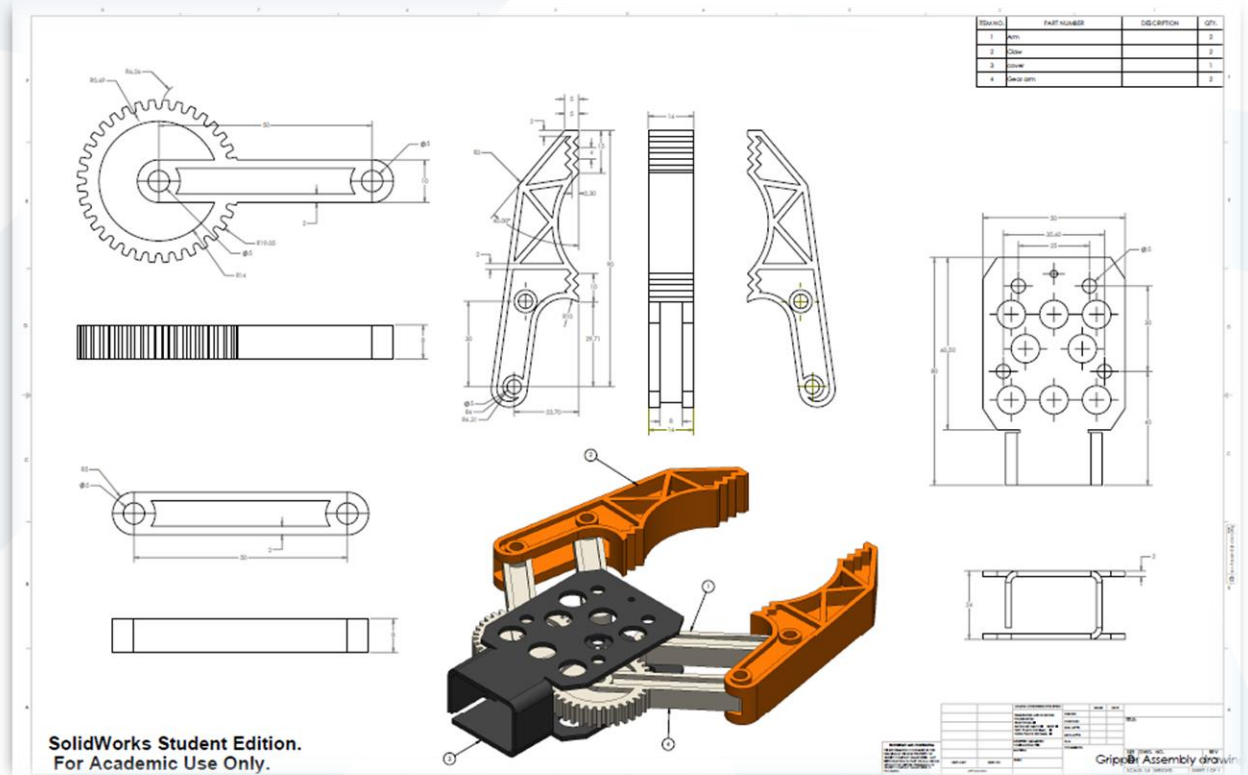
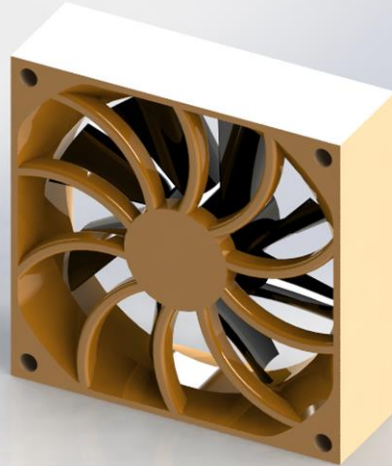
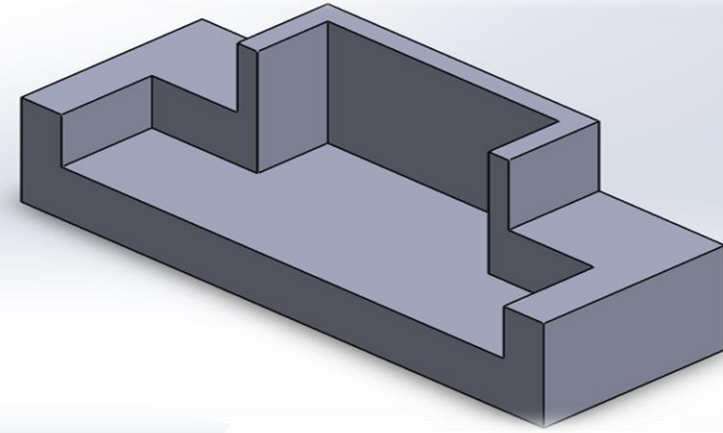
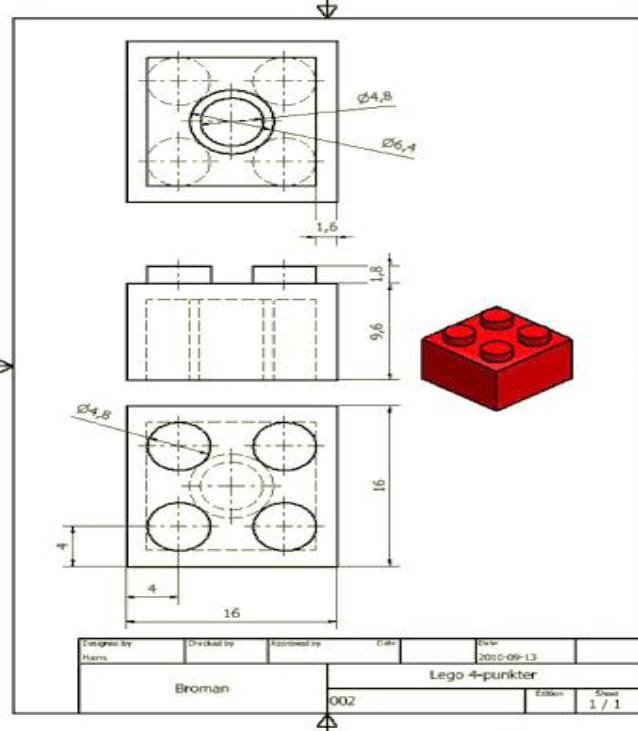
TYPES OF INDUSTRIAL DRAWING

Structural
drawing



Computer
drawing

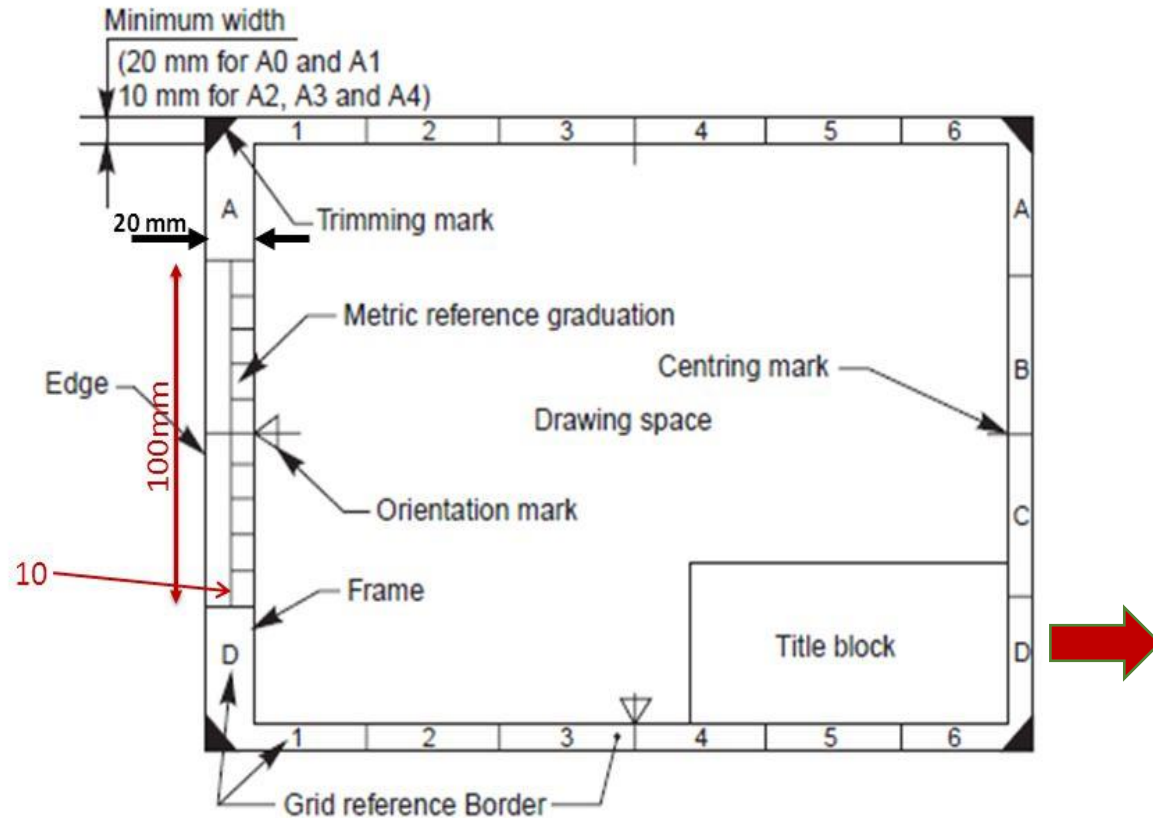




Industrial drawing traditional tools

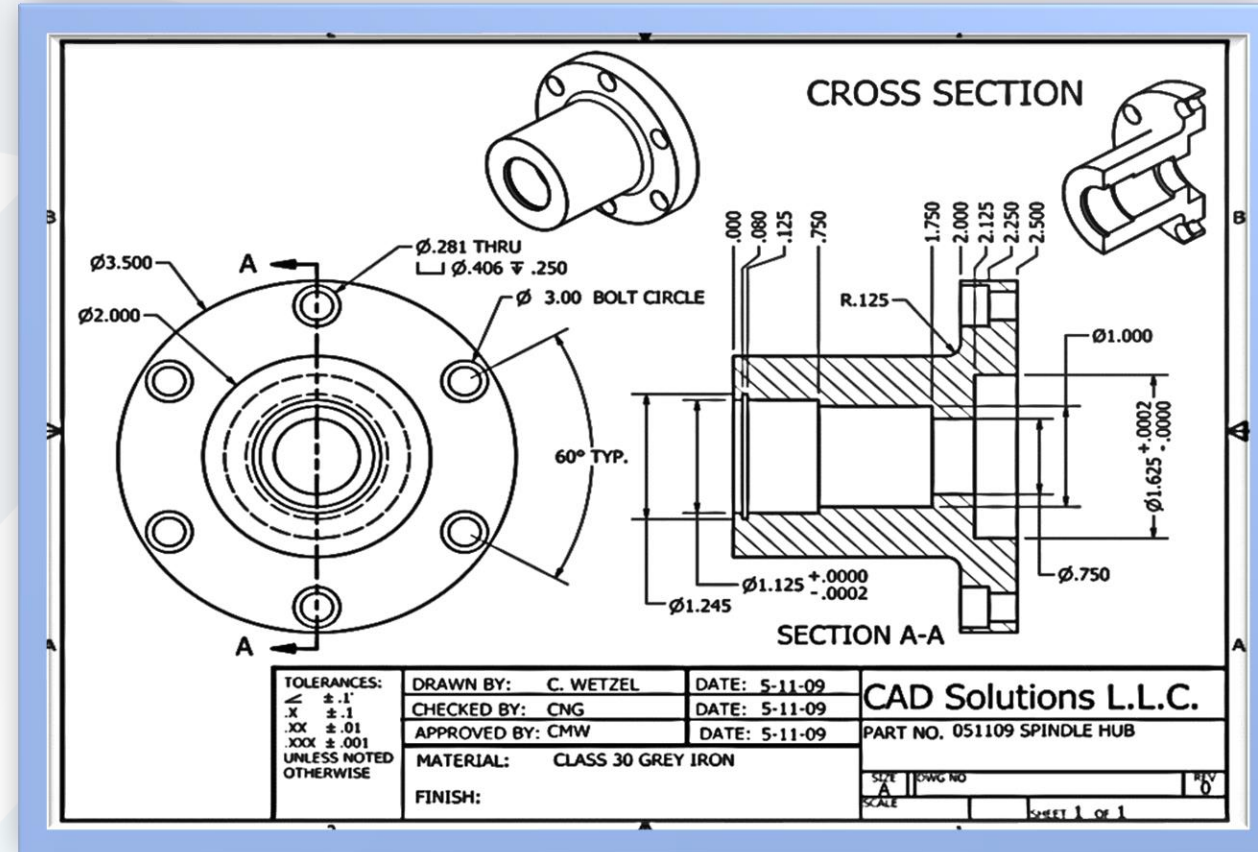
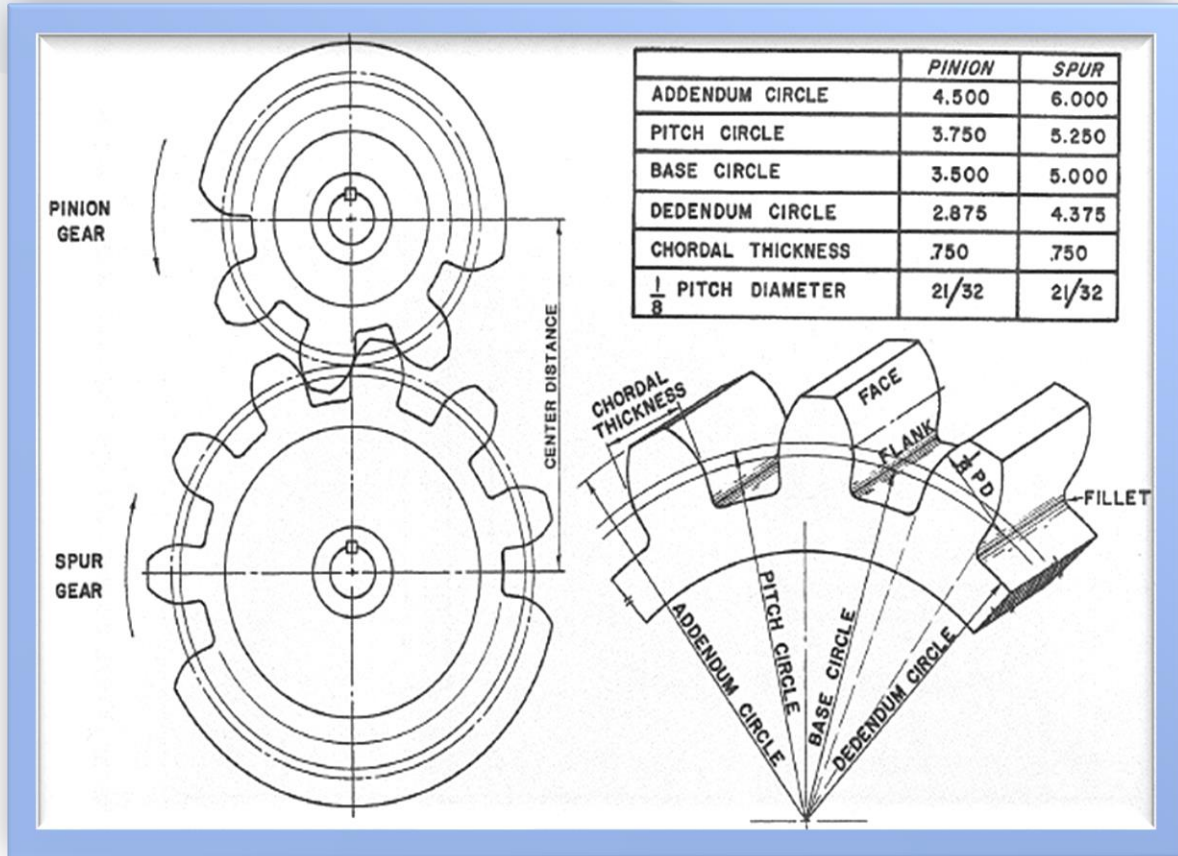


Drawing sheet-Title block



	DATE	SIGN	COLLEGE NAME	
STD.			COLLEGE NAME	
FAIR			SHEET NAME	
COMP.			SHEET NAME	
STUDENT NAME			SHEET NAME	
SEMESTER			SHEET NAME	
ENROLLMENT NO.			SYMBOL	DRG. NO.
SCALE				

Examples

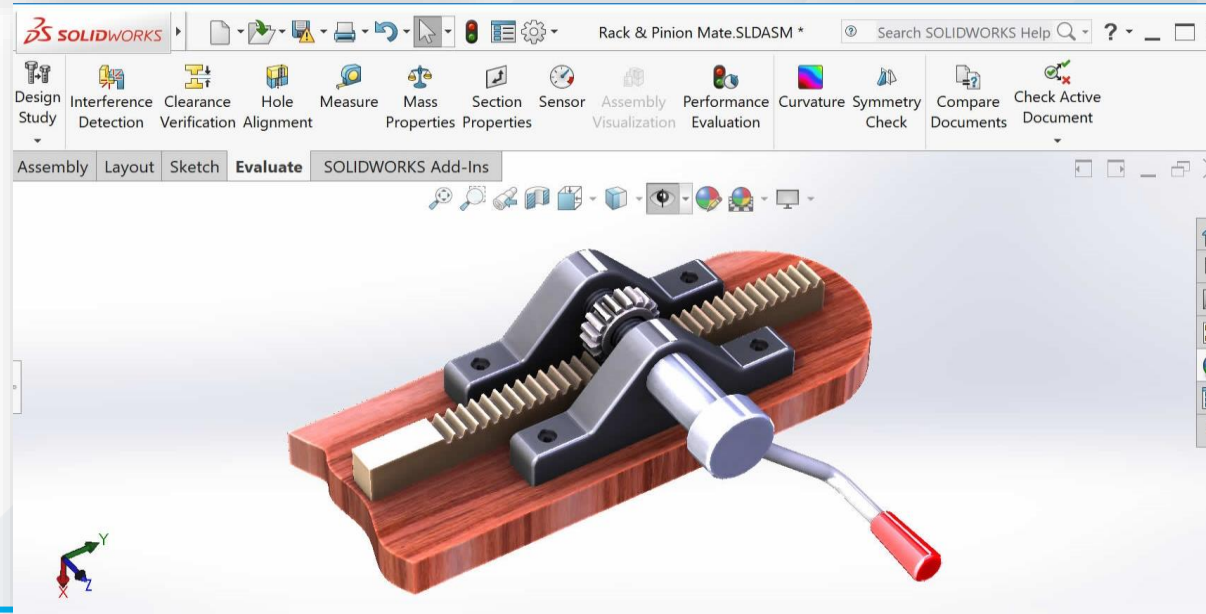
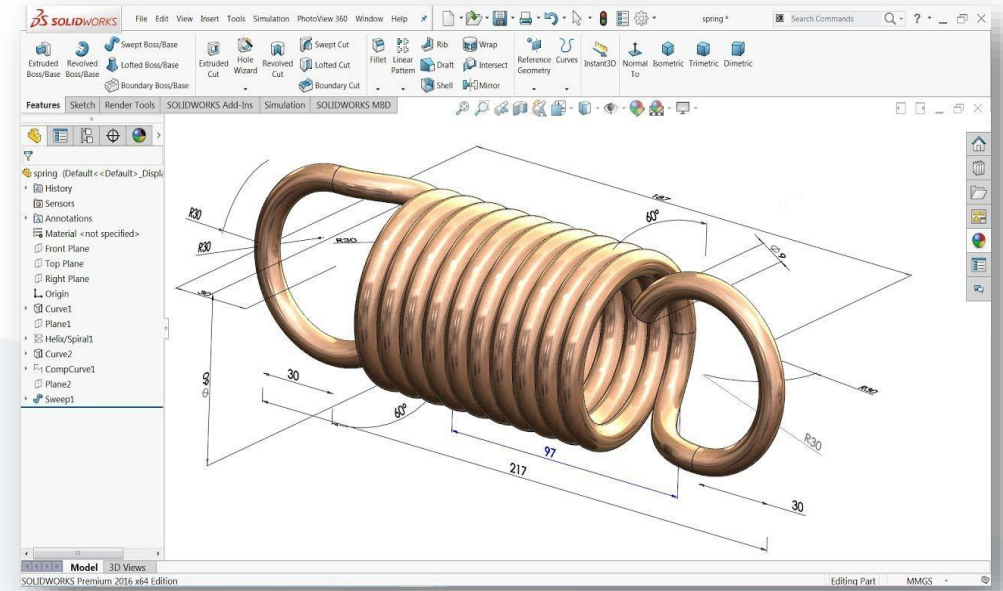
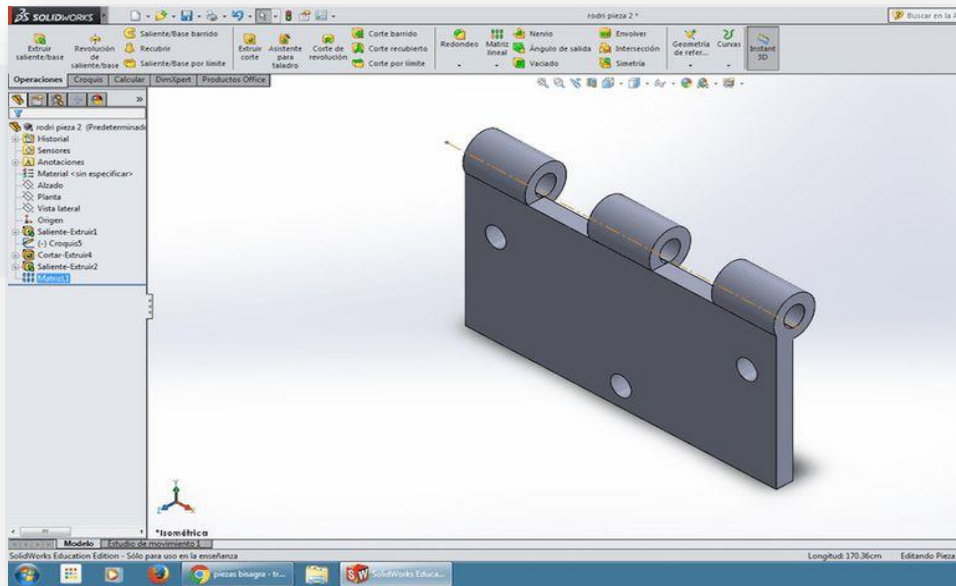


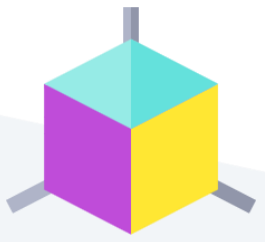
Design programs :

❑ CAD: Computer Aided Design

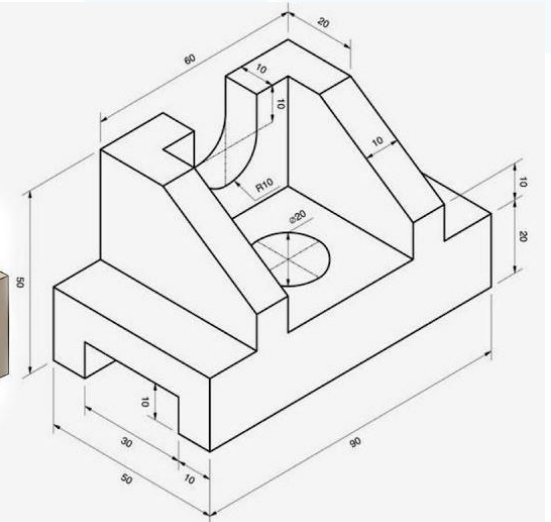
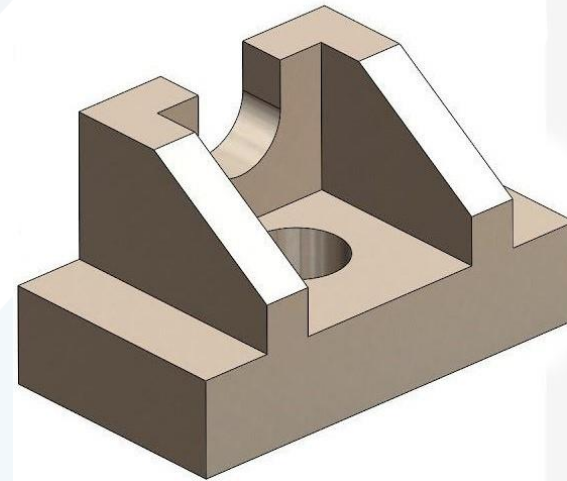
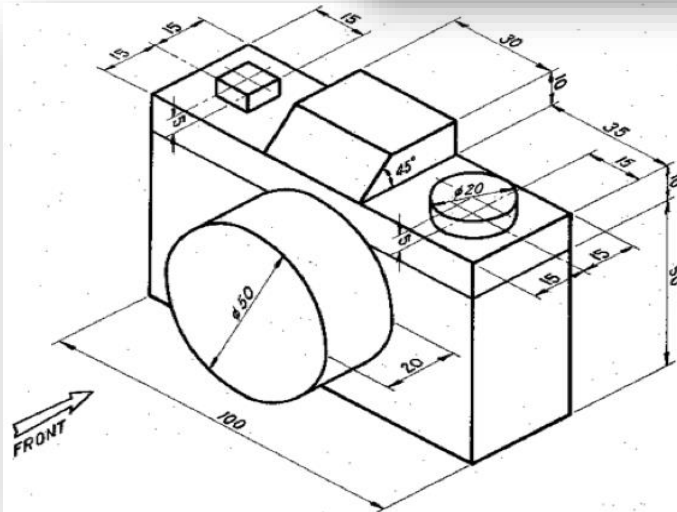
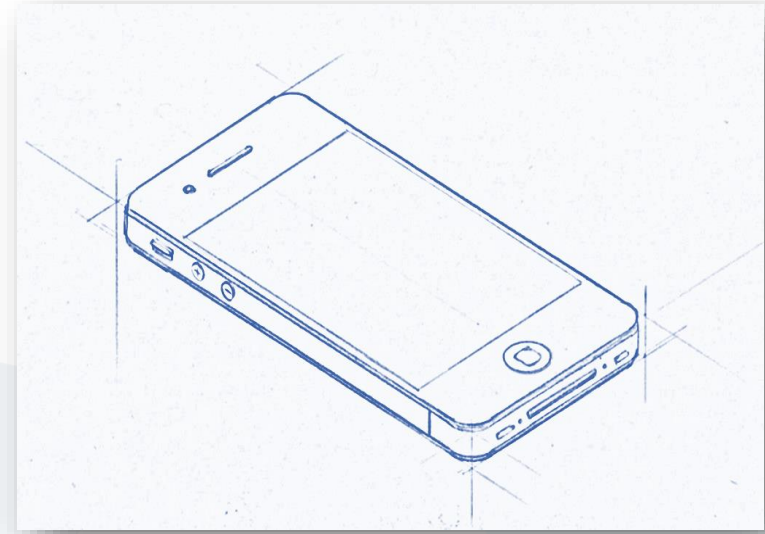
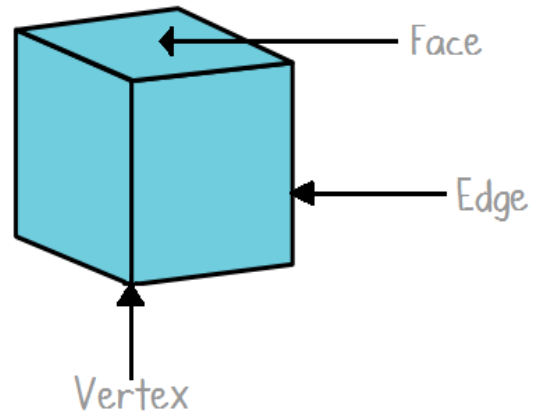
❑ CAM: Computer Aided Manufacture

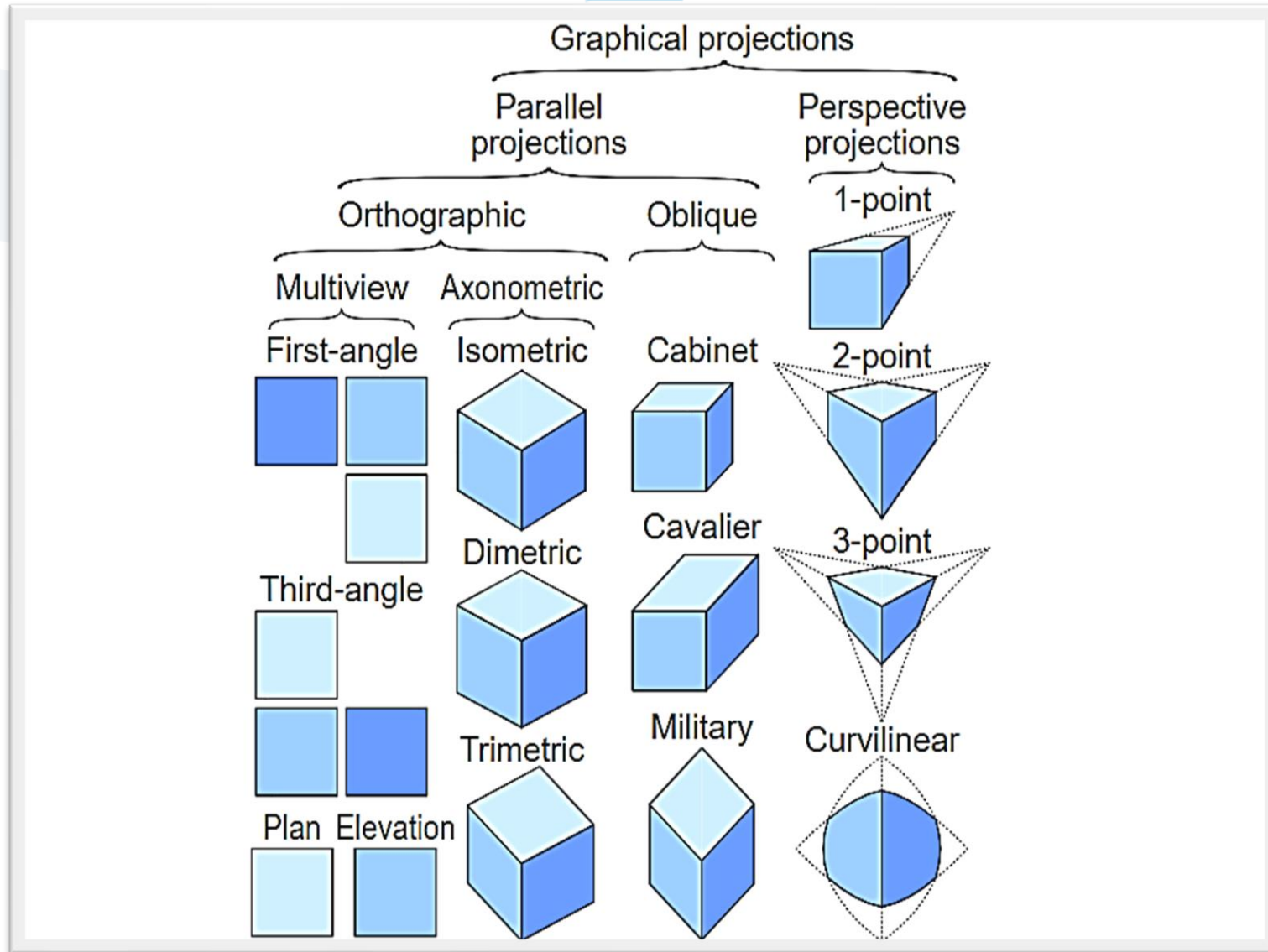






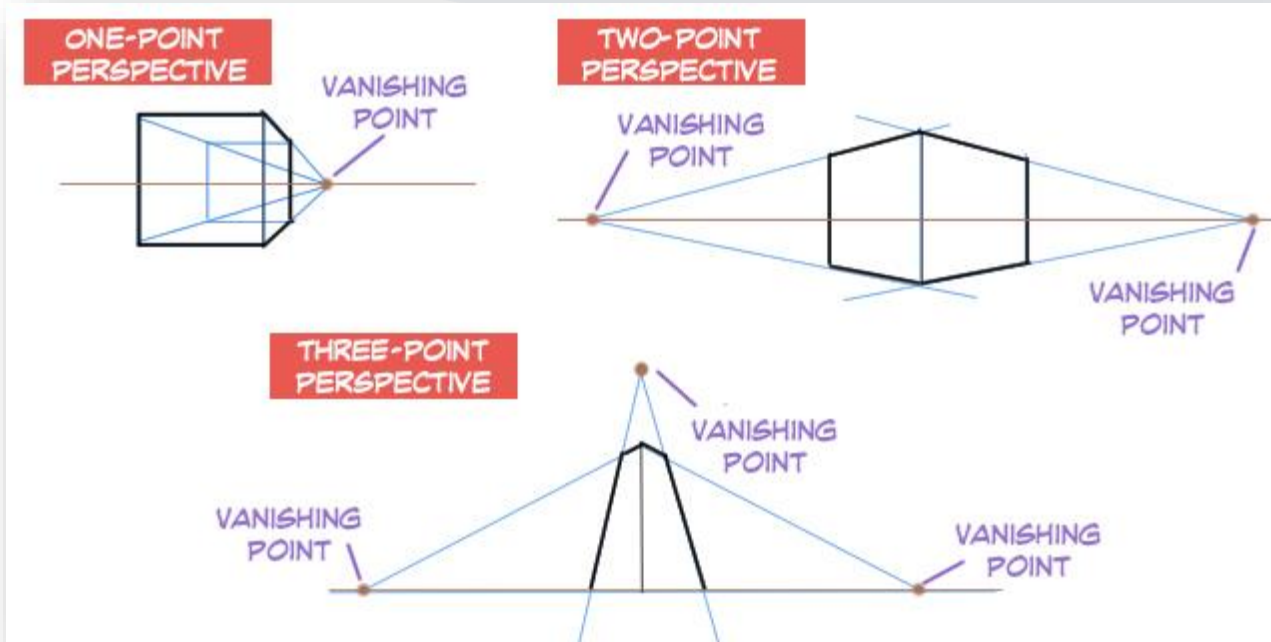
Pictorial drawing





Perspective projection

(المنظور الفوتوغرافي او المركزي)



- يرسم كما تراه عين الانسان و لا يظهر الأبعاد الحقيقية حيث الاجزاء القريبة تظهر اكبر من البعيدة.
- الاضلاع المتقابلة تتلاقى في نقطة تدعى نقطة التلاشي .
- هذا النوع يستخدم بالرسم المعماري.

Parallel projection (oblique)

المنظور الجبهي

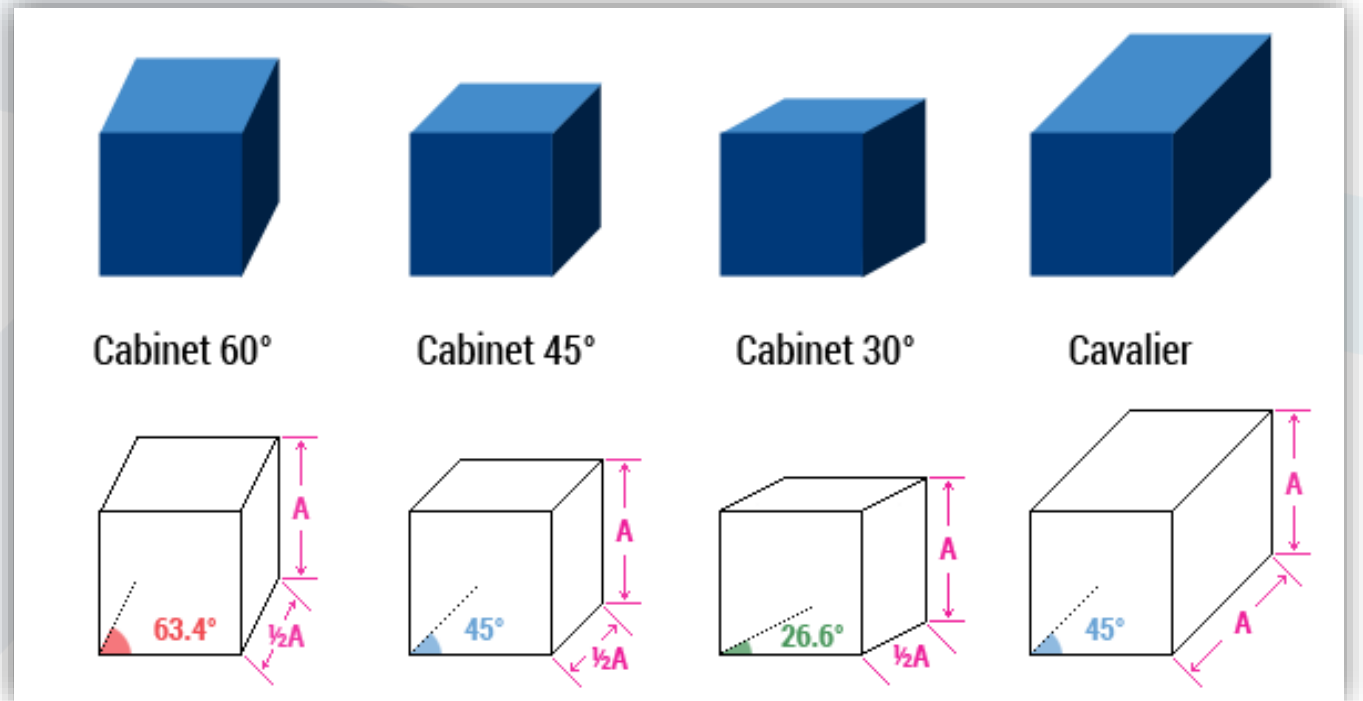
- يميل عن الافق بزاوية 45 درجة.

- يظهر الوجه الأمامي (المسقط) بصورة واضحة

حيث ينطبق ضلعين منه على المحاور.

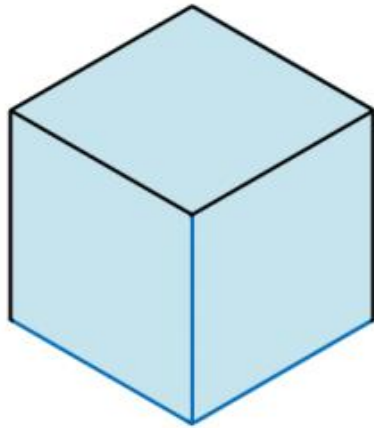
- يظهر اثنين من الأبعاد بشكل حقيقي اما البعد

الثالث فيمثل نصف القيمة الحقيقية.

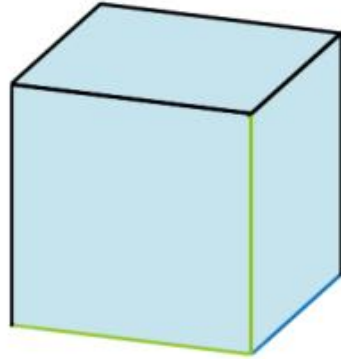


Orthographic (axonometric)

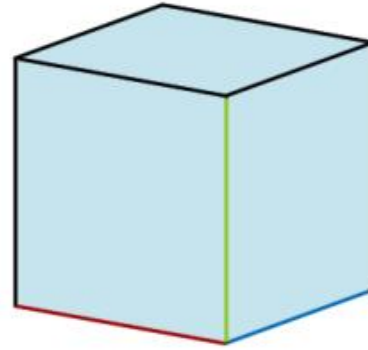
المنظور المتوازي المتساوي



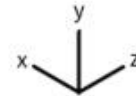
isometric



dimetric



trimetric



➤ Isometric

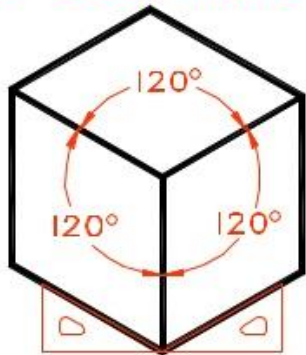
➤ Dimetric

➤ trimetric

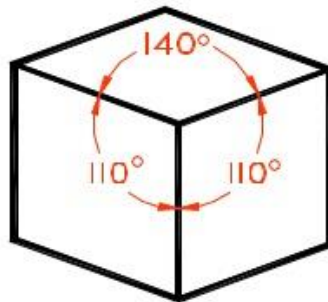
Differences

Types of Axonometrics

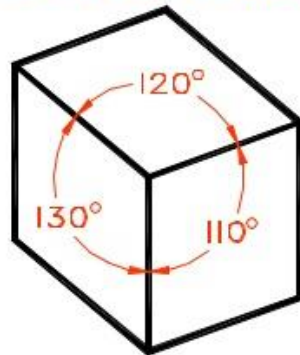
3 Equal axes 2 Equal axes 0 Equal axes
3 Equal angles 2 Equal angles 0 Equal angles



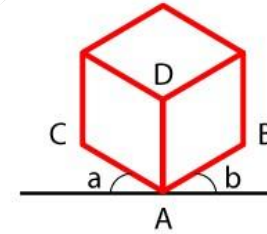
A. ISOMETRIC



B. DIMETRIC

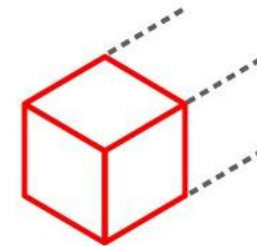


C. TRIMETRIC

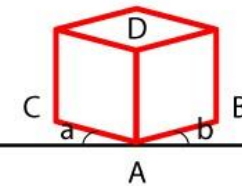


$a = b = 30$
 $AB = AC = AD$

Isometric Projection

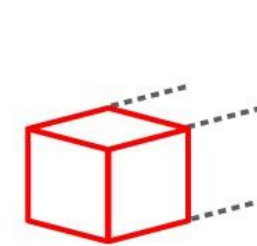


Isometric Projection

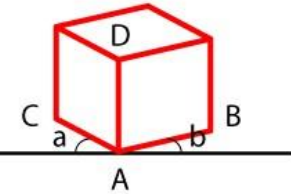


$a = b$
 $AB = AC \neq AD$

Dimetric Projection

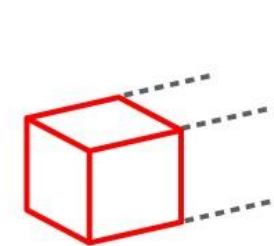


Dimetric Projection



$a \neq b$
 $AB \neq AC \neq AD$

Trimetric Projection



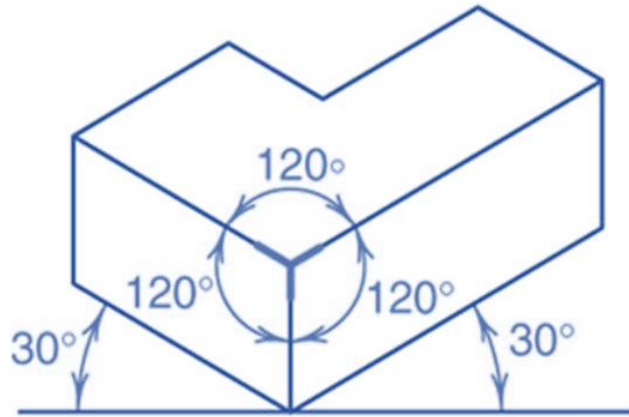
Trimetric Projection

isometric

Isometric Drawing-

Angle between all axes equal

No Surface has more emphasis than any other



- يميل عن الافق من كلا الجانبين بزاوية 30 درجة.

- يظهر الأبعاد كافة بشكل حقيقي.

- هذا النوع الشائع الاستخدام في الرسم الصناعي.

Thanks

The end