

# Engineering Drawing

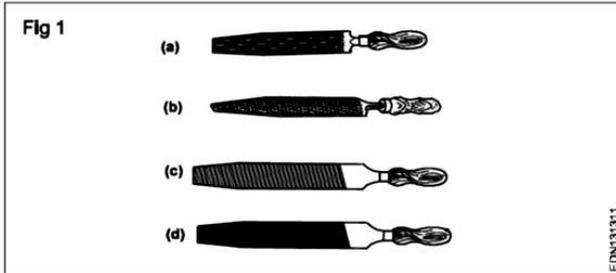
## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

Que. 1. Draw Free hand sketch of the following:

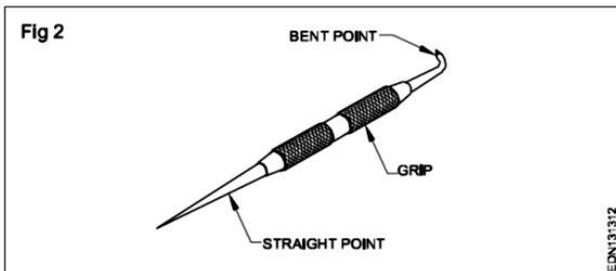
### Hand Tools

#### Files (Fig 1)

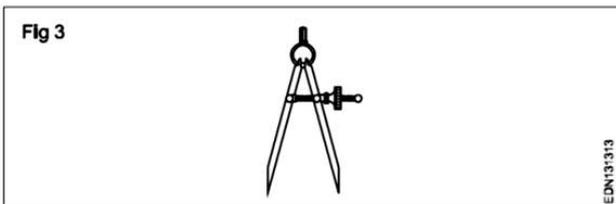
- a Curved cut file
- b Rasp cut file
- c Single cut file
- d Double cut file



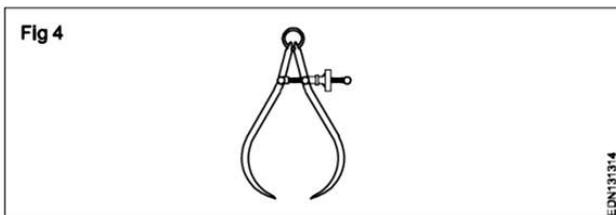
#### Scriber (Fig 2)



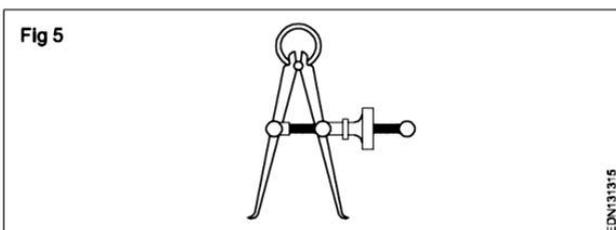
#### Divider (Fig 3)



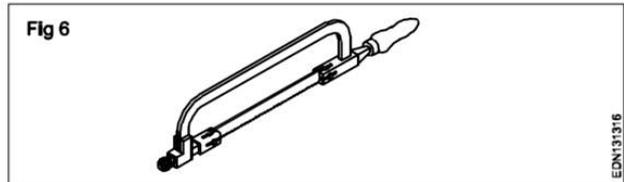
#### Outside caliper (Fig 4)



#### Inside caliper (Fig 5)



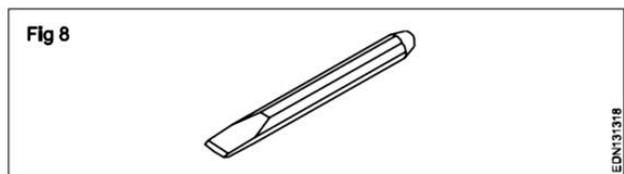
#### Hacksaw (Fig 6)



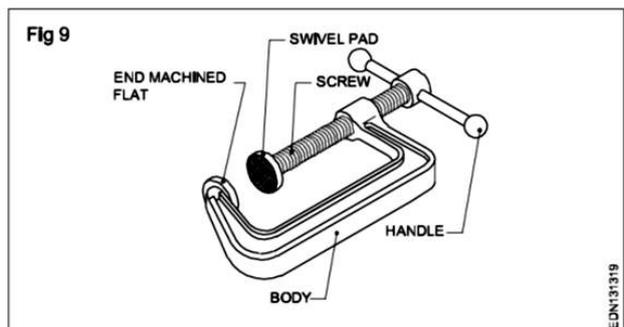
#### Ball pein hammer (Fig 7)



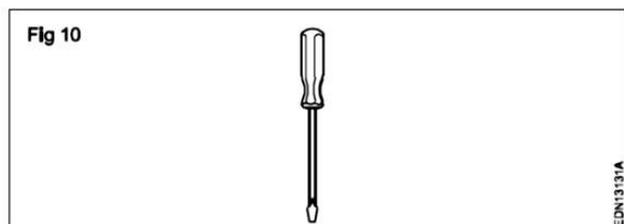
#### Chisel (Fig 8)



#### 'C' clamp (Fig 9)



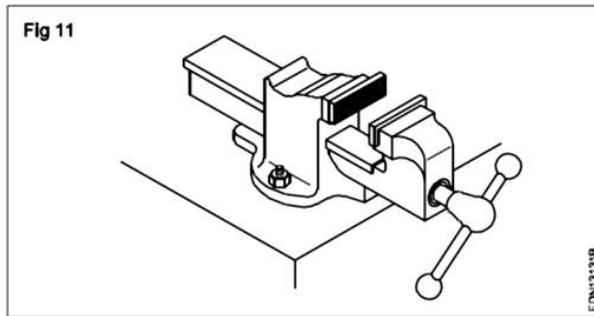
#### Screw driver (Fig 10)



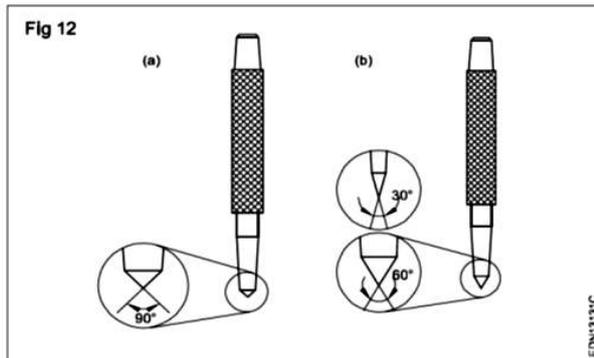
# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

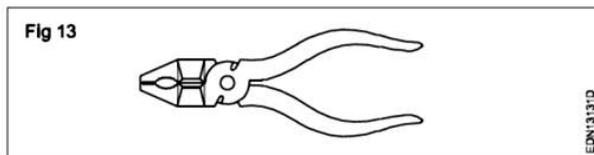
Bench vice (Fig 11)



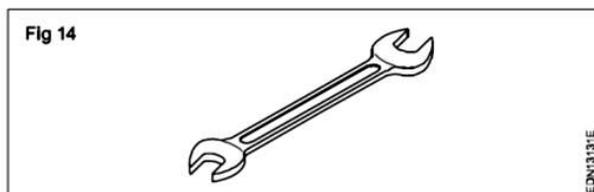
Centre punch (Fig 12)



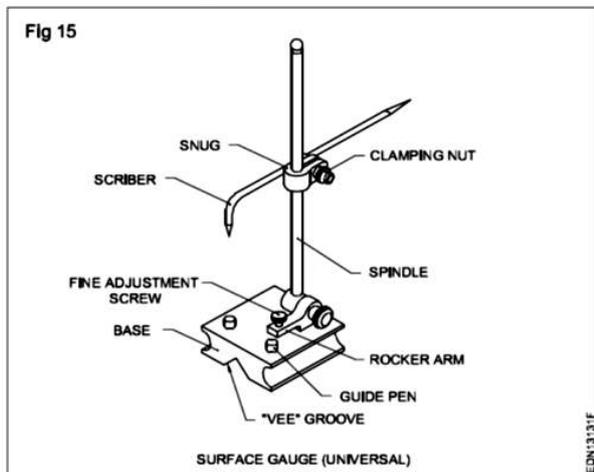
Cutting plier (Fig 13)



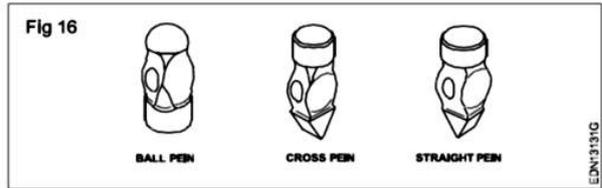
Open end spanner (Fig 14)



Marking gauge (Fig 15)

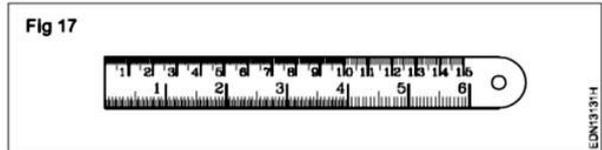


Hammers (Fig 16)

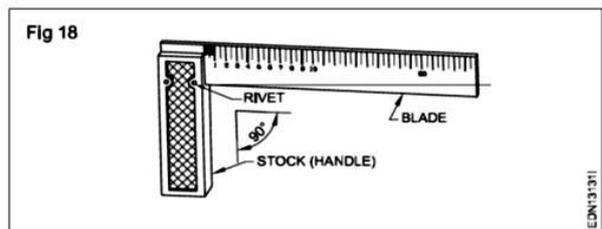


### Measuring Tools

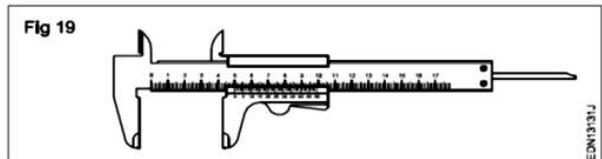
Steel rule (Fig 17)



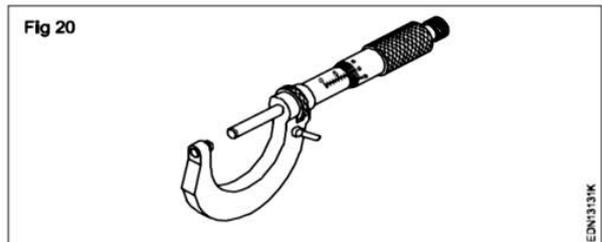
Try square (Fig 18)



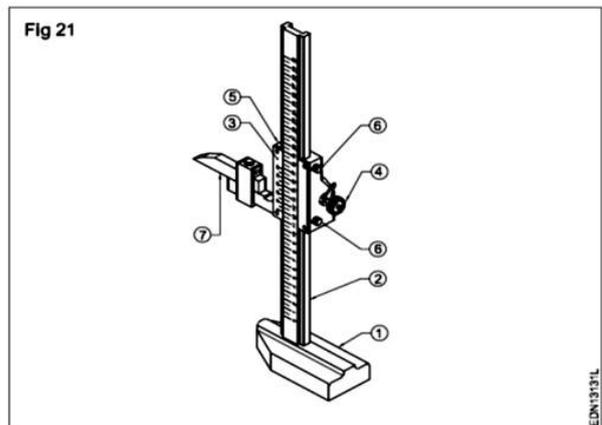
Vernier caliper (Fig 19)



Micrometer (Fig 20)



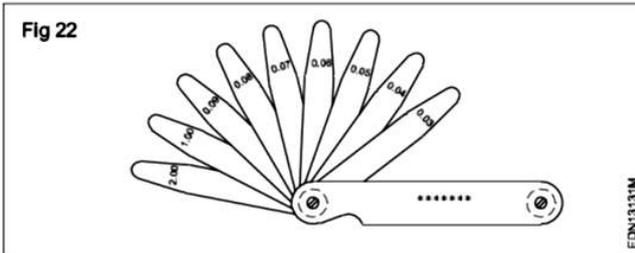
Vernier height gauge (Fig 21)



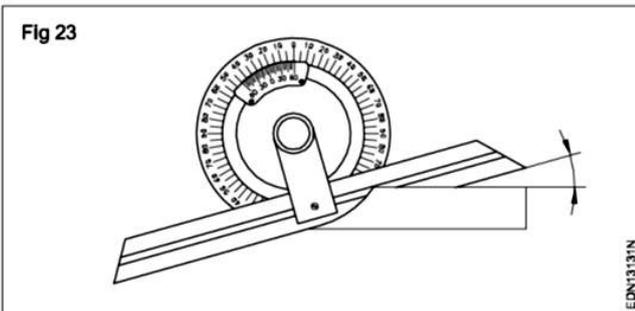
# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

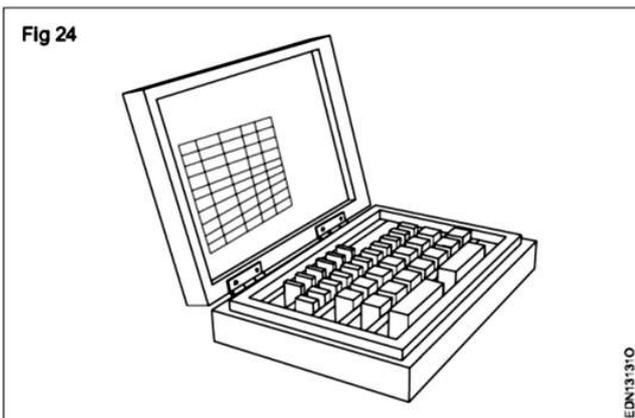
Feeler gauge (Fig 22)



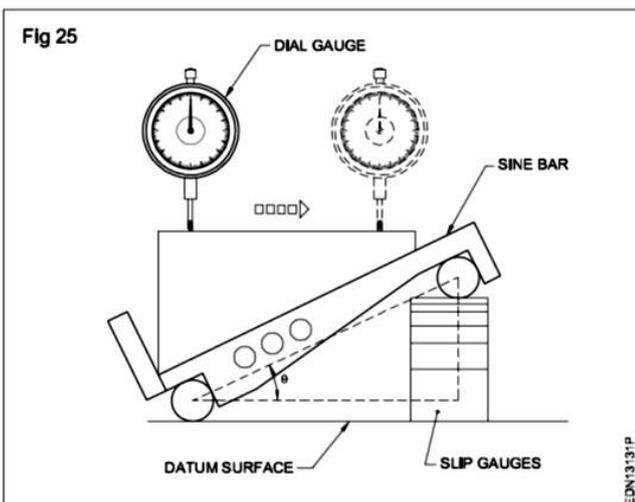
Bevel protractor (Fig 23)



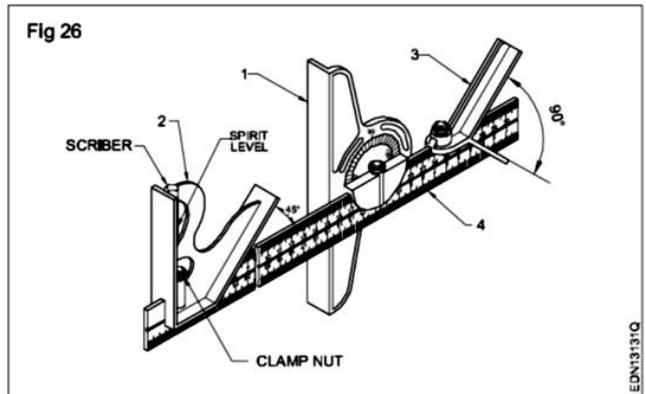
Slip gauge box (Fig 24)



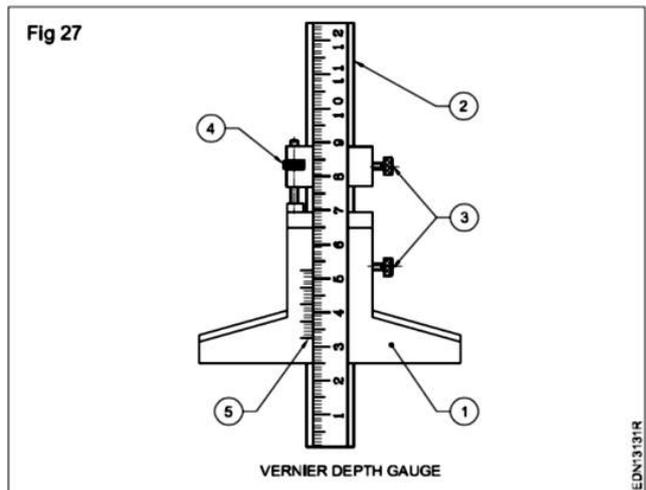
Sine bar with dial gauge (Fig 25)



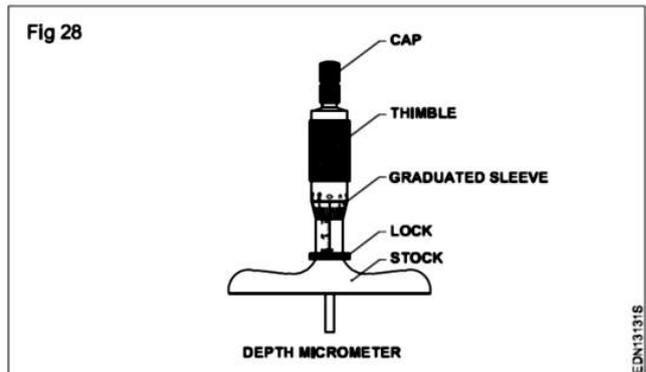
Combination set (Fig 26)



Vernier depth gauge (Fig 27)



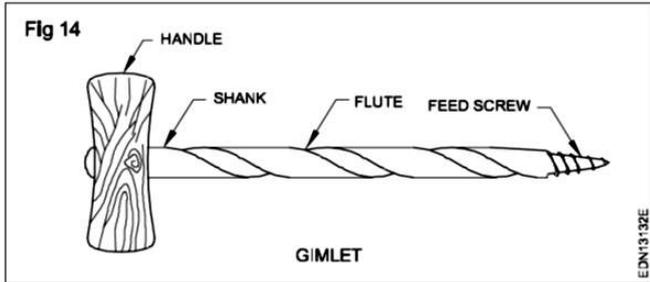
Depth micrometer (Fig 28)



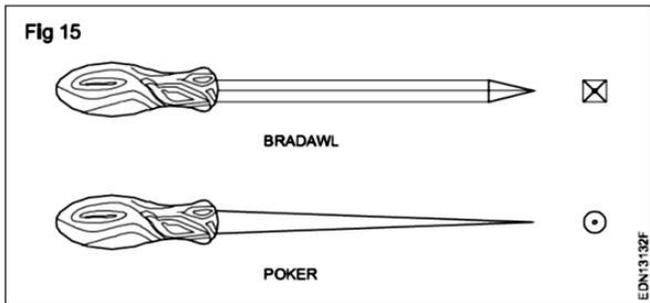
# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

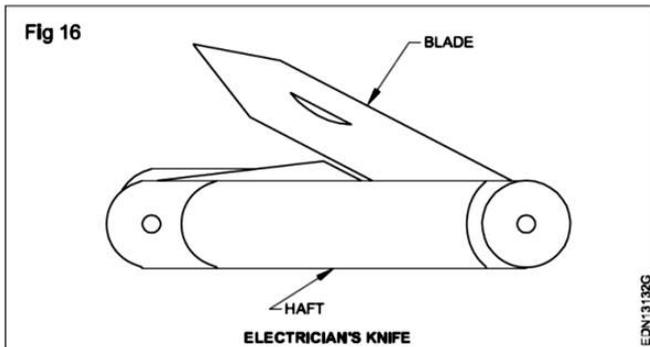
Gimlet (Fig 14)



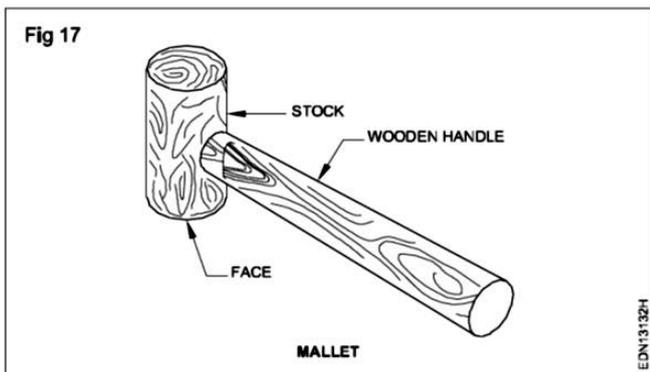
Bradawl & poker (Fig 15)



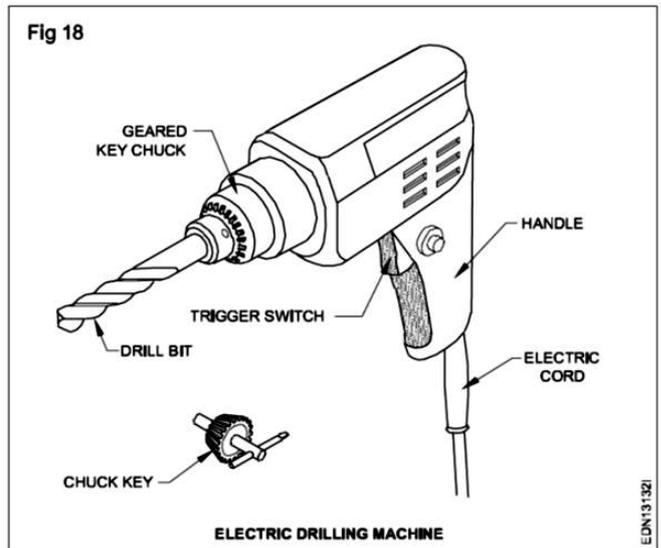
Electrician's knife (Fig 16)



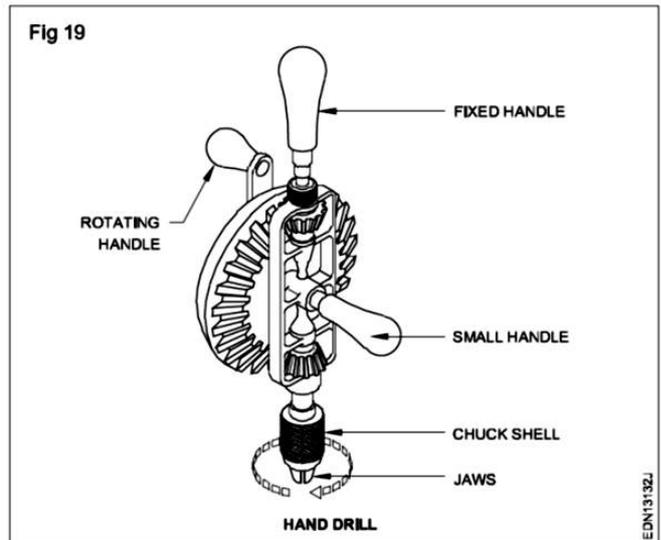
Mallet (Fig 17)



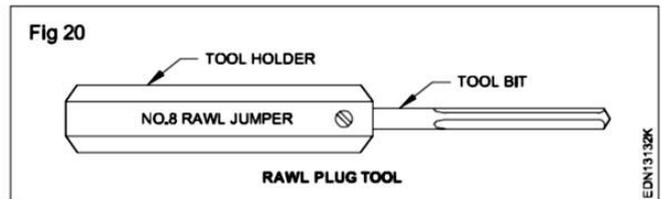
Electric drilling machine (Fig 18)



Hand drill (Fig 19)



Rawl plug tool (Fig 20)



# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

Que. 2. Draw solid figures, cubes, cuboids, cone, prism and pyramid:

### 1. Cube

How to Draw an Isometric View of Cube/ Engineering Drawing of Cube in Side 30 MM/ HINDI/ OMG

<https://youtu.be/v-PgCnnOHQE>

Click Hear to Watch Video

### 2. Cuboid

How to Draw an Isometric View of Cuboid/ Engineering Drawing of Cuboid/ HINDI/ OMG

[https://youtu.be/rDU86fK\\_4Zg](https://youtu.be/rDU86fK_4Zg)

Click Hear to Watch Video

### 3. Cylinder

How To Draw Isometric View Of Cylinder / Cylinder In Isometric Projection/ Hindi/ Omg

[https://youtu.be/w\\_tDrWdT5Js](https://youtu.be/w_tDrWdT5Js)

Click Hear to Watch Video

## Prism

### 1. Rectangular prism

How to Draw Isometric View of Rectangular Prism/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/q20jzcDIBBo>

Click Hear to Watch Video

### 2. Triangular Prism

How to Draw Isometric View of Triangular Prism/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

[https://youtu.be/amY\\_qiMahjk](https://youtu.be/amY_qiMahjk)

Click Hear to Watch Video

### 3. Pentagonal prism

How to Draw Isometric View of Pentagonal Prism/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/jQnn5ImZMGo>

Click Hear to Watch Video

Solutions and Explanation on  
YouTube Channel



# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

### 4. Hexagonal prism

How to Draw Isometric View of Hexagonal Prism/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/mvIVB85eHK0>

Click Hear to Watch Video

Q. A Hexagonal Prism Of Side 3 Cm And Height Of 8 Cm. ( Jan 2018)  
How to Draw Hexagonal Prism | Hexagonal Prism Engineering Drawing.(HINDI)

<https://youtu.be/SSm91U-eb34>

Click Hear to Watch Video

### Pyramid

#### 1. Triangular Pyramid

How to Draw Isometric View of Triangular Pyramid/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/sxsyO12TG8A>

Click Hear to Watch Video

#### 2. Square Pyramid / Rectangular Pyramid

How to Draw Isometric View of Square Pyramid/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/HyQwqiPuZw0>

Click Hear to Watch Video

#### 3. Pentagonal Pyramid

How to Draw Isometric View of Pentagonal Pyramid/ Isometric Drawing/ Engineering Drawing/ HINDI/ OMG

<https://youtu.be/SCAn3zk4l98>

Click Hear to Watch Video

#### 4. Hexagonal Pyramid

How to Draw Hexagonal Pyramid | Isometric View | Isometric Drawing |Engineering Drawing |HINDI |OMG

<https://youtu.be/57IE4usWoeY>

Click Hear to Watch Video

Solutions and Explanation on  
YouTube Channel



# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

Que. 3. Draw Polygons and ellipse of the following:

### 1. Pentagon

Q. Construct a regular pentagon by any one method on the circle of diameter 100mm. (Jan 2018)

#### 1. पेंटागॉन की साईड दे कर है तो

Draw a pentagon of side 40mm by using general method/ general method of polygon/ ITI ENGG.

DRAWING

<https://youtu.be/i1unc3U9AP4>

Click Hear to Watch Video

#### 2. सककल का डाईमीटर देकर है तो

Construct a regular Pentagon by Circle of diameter 100 mm|| Regular Pentagon inscribed in a circle.

<https://youtu.be/DJ0B-Hdfhh0>

Click Hear to Watch Video

### 2. Hexagon

#### 1. By Arc Method

How to draw hexagon by arc method/ Inscribed circle method hexagon/ draw polygon/ षट्भुज कैसे बनाये

<https://youtu.be/l1PC-Y73lek>

Click Hear to Watch Video

### 3. Heptagon

Q. Inscribe A Regular Heptagon In A Circle If The Length Of One Side Of The Heptagon Is 20mm. (July 2018)

#### 1. Perpendicular Bisector Method

Heptagon Perpendicular Bisector Method. How To Draw Heptagon In Engineering Drawing, Polygon, HINDI

<https://youtu.be/kgc1V7-Jmtg>

Click Hear to Watch Video

#### 2. Semi Circle Method

How To Draw Heptagon Using Semicircle Method, Heptagon By Semicircle Method, Engineering Draw, HINDI

[https://youtu.be/xyI0XF\\_yR\\_w](https://youtu.be/xyI0XF_yR_w)

Click Hear to Watch Video

Solutions and Explanation on  
YouTube Channel



Open Mind Guruji

Subscribe

For More Updates

# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

### 4. Ellipse

#### 1. Four Centre Method

Q. Construct An Ellipse Having Major Axis As 120mm And Minor Axis 60mm Using Four Centre Method. (July 2017)

Draw Ellipse by four Centre Method/ 4 Centre Method/ Ellipse Engineering Drawing (Hindi)

<https://youtu.be/GFSArqQsW-w>

Click Hear to Watch Video

#### 2. Concentric Circle Method

Q. Construct An Ellipse Having Major Axis As 80mm And Minor Axis 40mm Using Concentric Circle Method. (July 2017)

Ellipse by concentric circle method/ Ellipse Engineering Drawing / how to draw Ellipse/ OMG

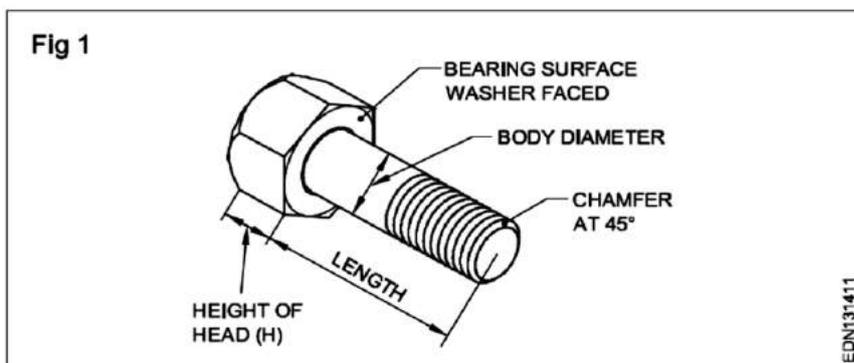
[https://youtu.be/CxJ\\_joiMXT0](https://youtu.be/CxJ_joiMXT0)

Click Hear to Watch Video

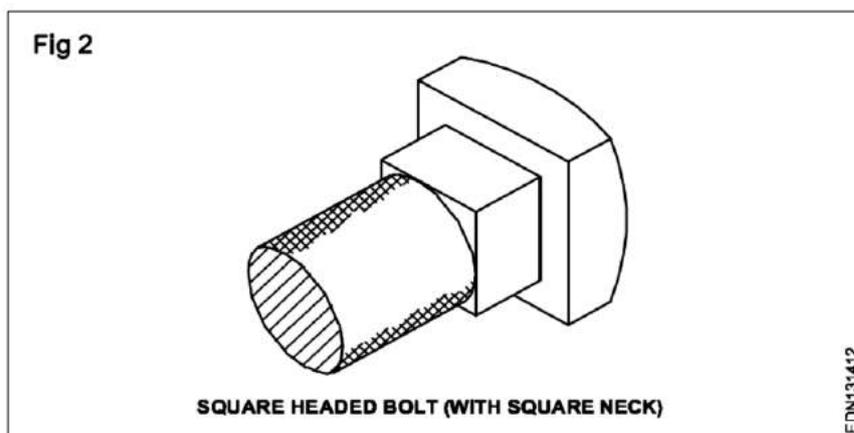
Que. 4. Draw freehand drawing of simple fasteners (bolts, nuts and rivets etc.)solid figures :

### Bolts

Hexagonal headed bolt (Fig 1)



Square headed bolt (Fig 2)



Solutions and Explanation on  
YouTube Channel

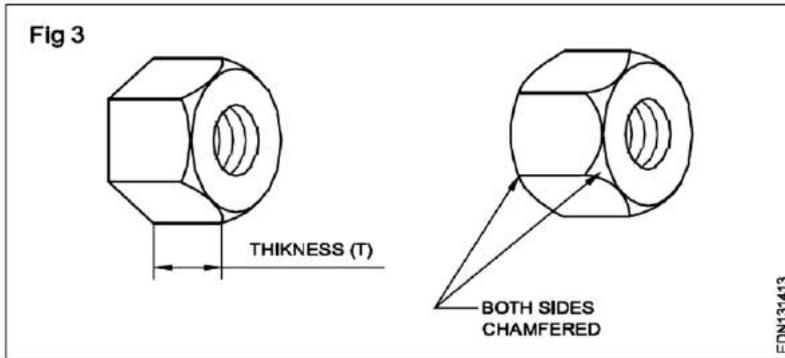
Open Mind Guruji  
Subscribe For More Updates

# Engineering Drawing

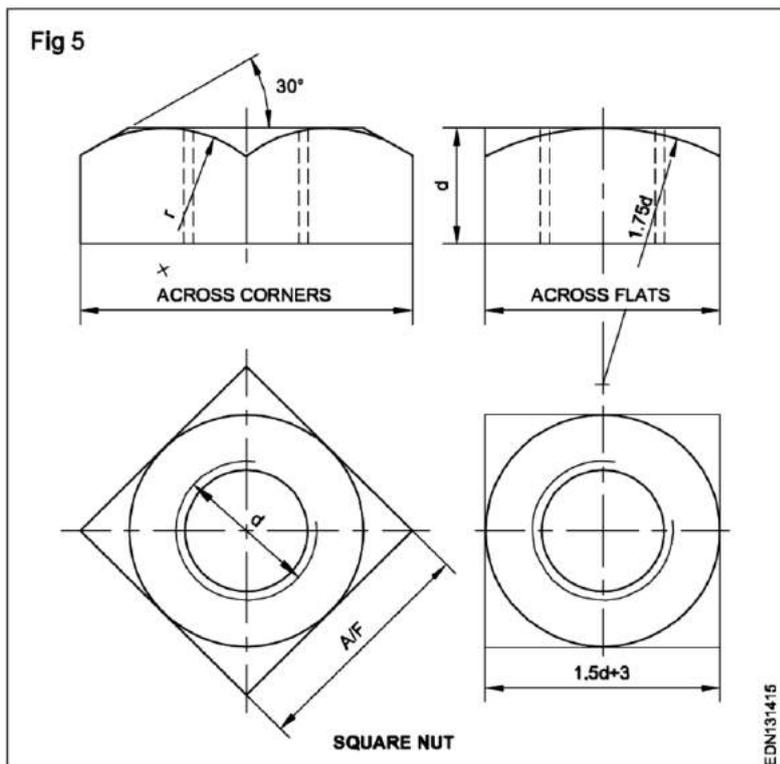
## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

### Nuts

Hexagonal nuts (Fig 3 & 4)



Square nuts (Fig 5)

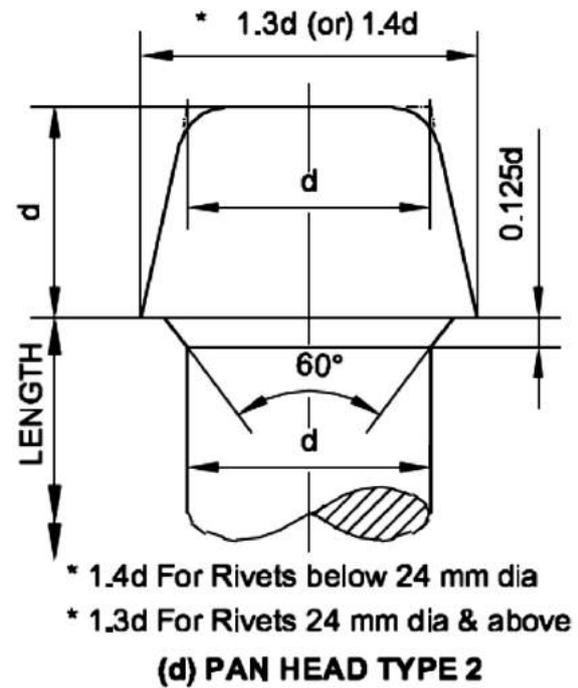
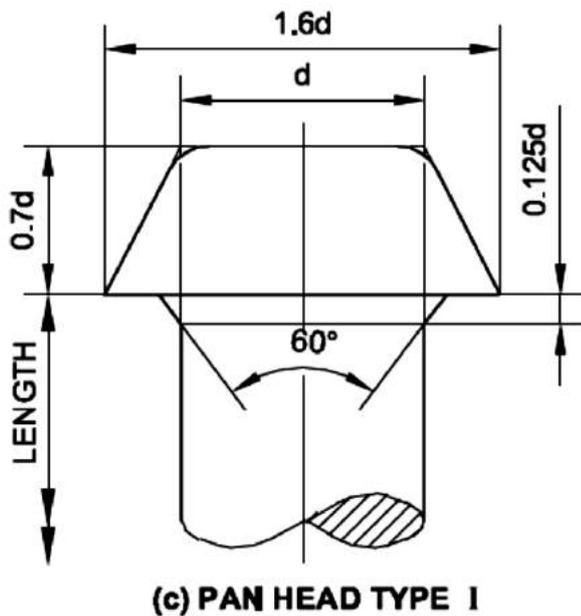
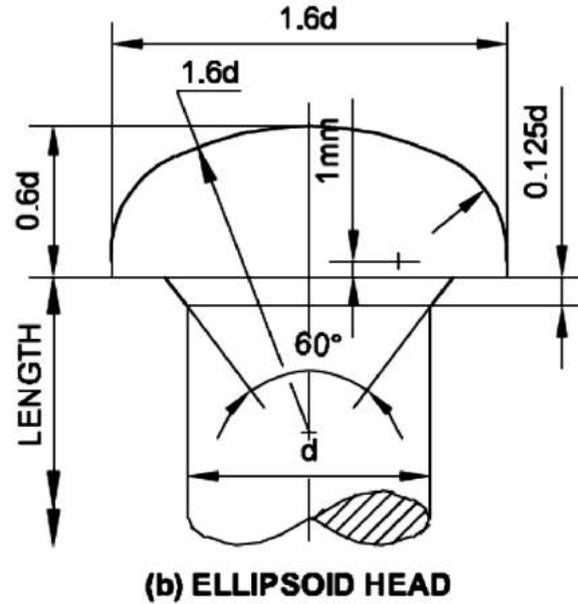
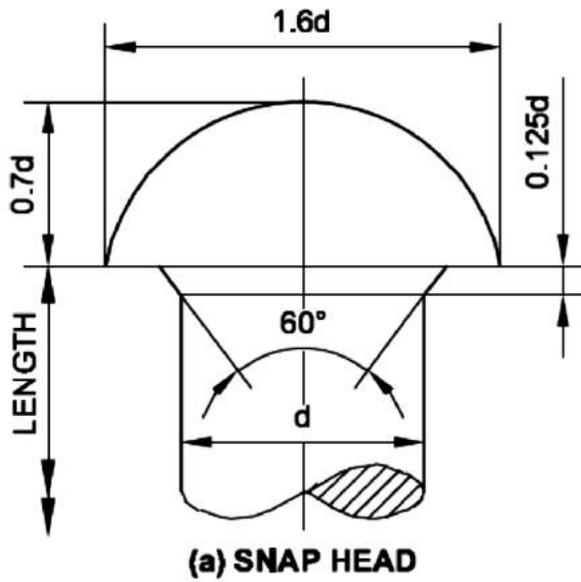


# Engineering Drawing

ITI 1<sup>st</sup> Year, Common For All Engineering Trade

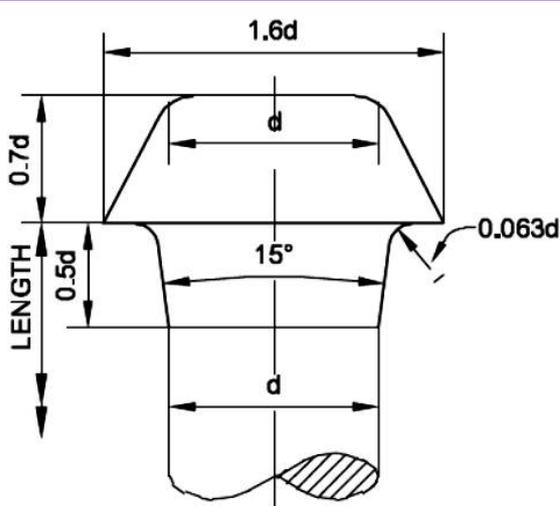
## Rivets

Fig 8

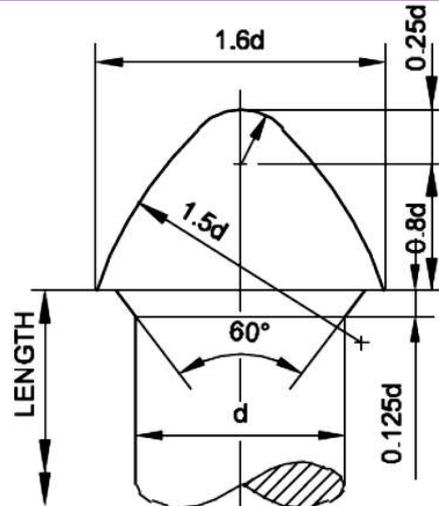


# Engineering Drawing

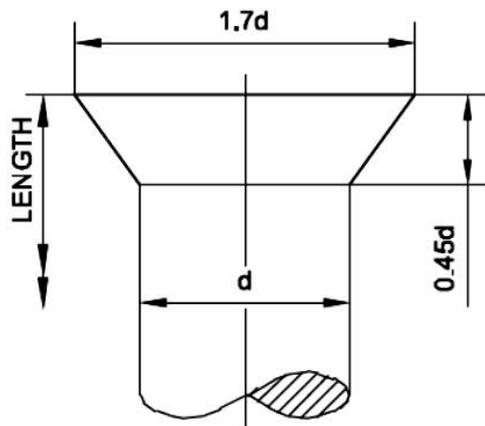
ITI 1<sup>st</sup> Year, Common For All Engineering Trade



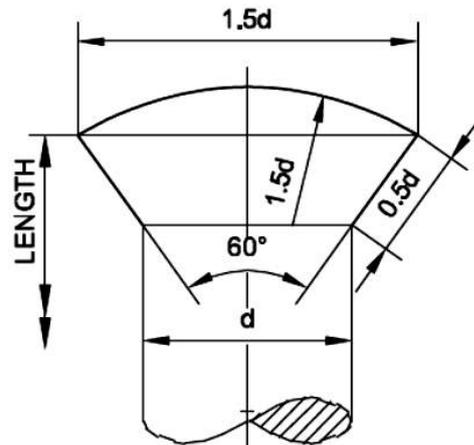
(e) PAN HEAD WITH TAPERED NECK



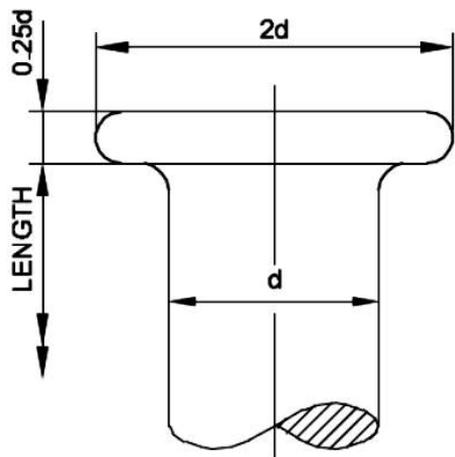
(f) CONICAL HEAD



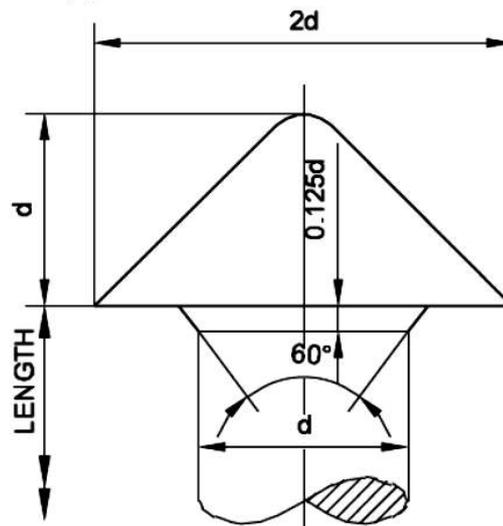
(g) COUNTERSUNK HEAD



(h) ROUNDED COUNTERSUNK HEAD



(i) FLAT HEAD RIVET



(j) STEEPLE HEAD

RIVETS LONGER THAN FIVE DIAMETER

EDN131418

# Engineering Drawing

ITI 1<sup>st</sup> Year, Common For All Engineering Trade

## Symbolic representation of weld

S.no	Designation	Illustration	Symbol
1	Fillet		
2	Square butt		
3	Single V-butt		
4	Double V-butt		
5	Single U-butt		
6	Double U-butt		
7	Single bevel butt		
8	Double bevel butt		
9	Single J-butt		
10	Double J-butt		

11	Stud		
12	Bead edge or seal		
13	Sealing run		
14	Spot		
15	Seam		
16	Stitch		
17	Plug weld		

Open Mind Guruji  
"The Complete Guidance"

Solutions and Explanation on  
YouTube Channel

Open Mind Guruji  
Subscribe For More Updates

# Engineering Drawing

## ITI 1<sup>st</sup> Year, Common For All Engineering Trade

### Que. 5. Orthographic Projection

<https://youtu.be/B2VwywRcaF0>

Click Hear to Watch Video

<https://youtu.be/wAp9dB7Nq3o>

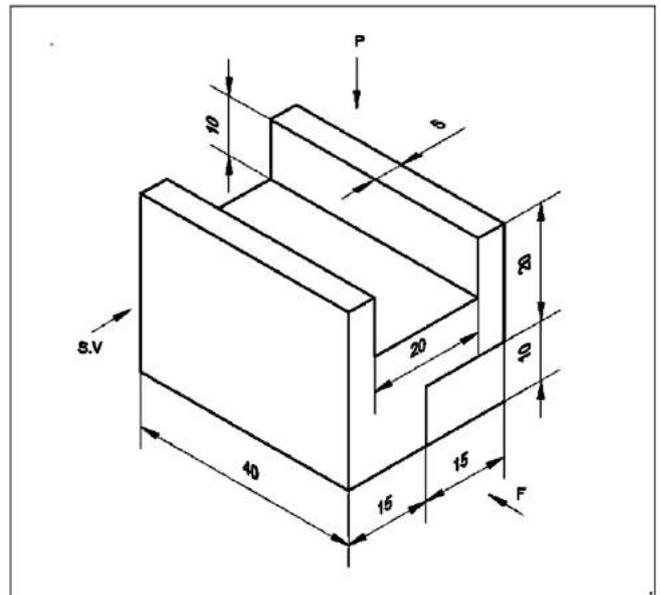
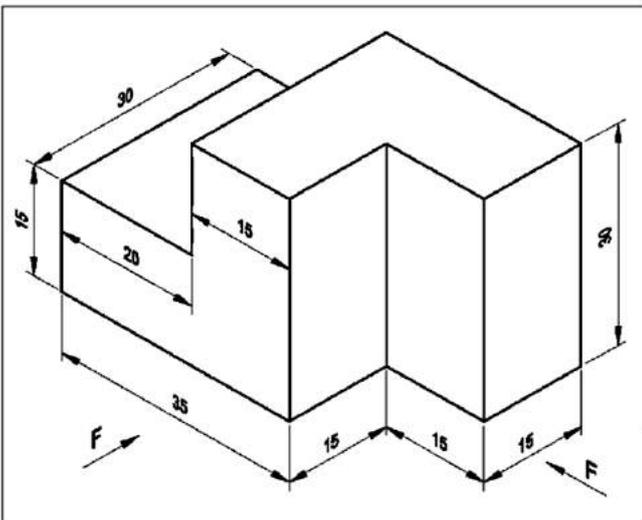
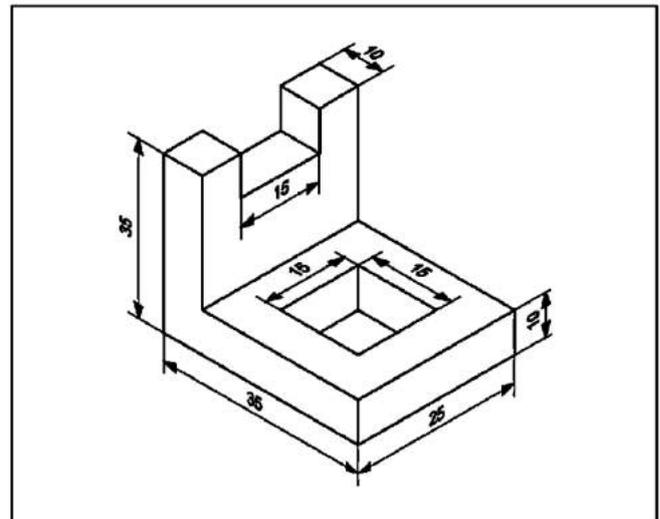
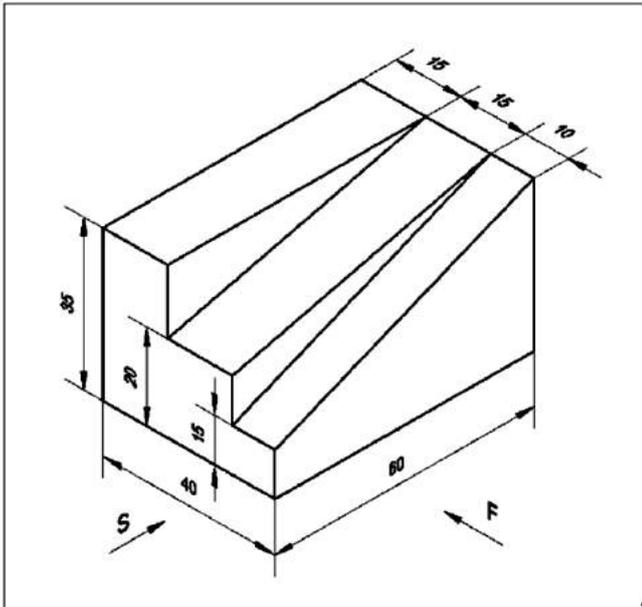
Click Hear to Watch Video

<https://youtu.be/ctKsz4ZGAdg>

Click Hear to Watch Video

Que. Draw the three View in 3<sup>rd</sup> angle projection method (Mark 20)

1) Plan 2) Elevation 3) Side view.



Solutions and Explanation on  
YouTube Channel



Open Mind Guruji

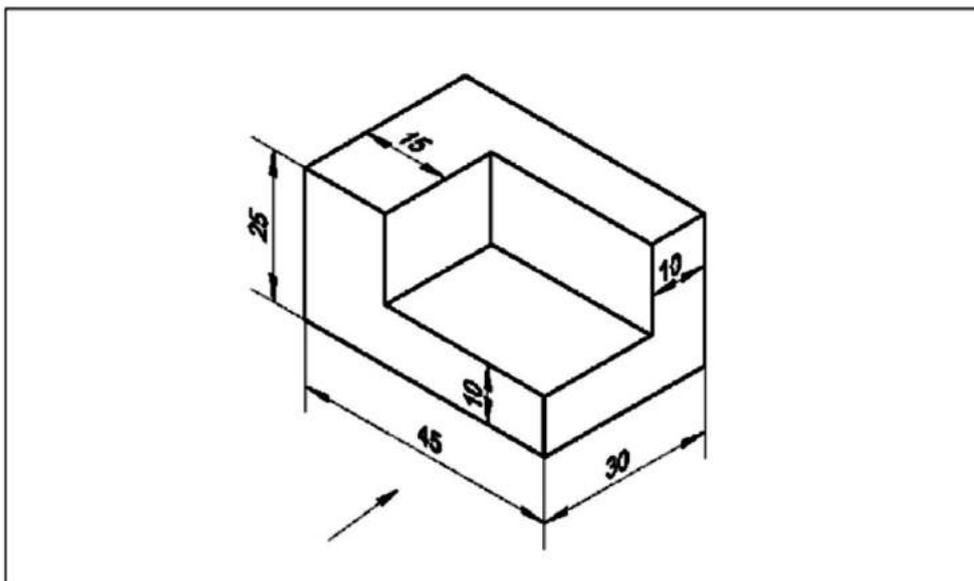
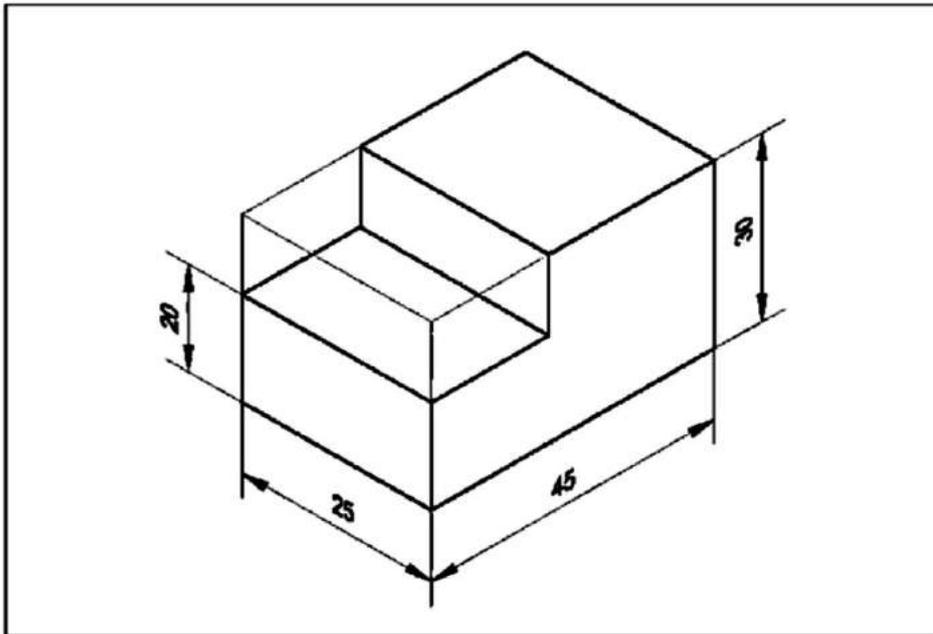
Subscribe

For More Updates

# Engineering Drawing

ITI 1<sup>st</sup> Year, Common For All Engineering Trade

---



---

Solutions and Explanation on  
YouTube Channel



Open Mind Guruji

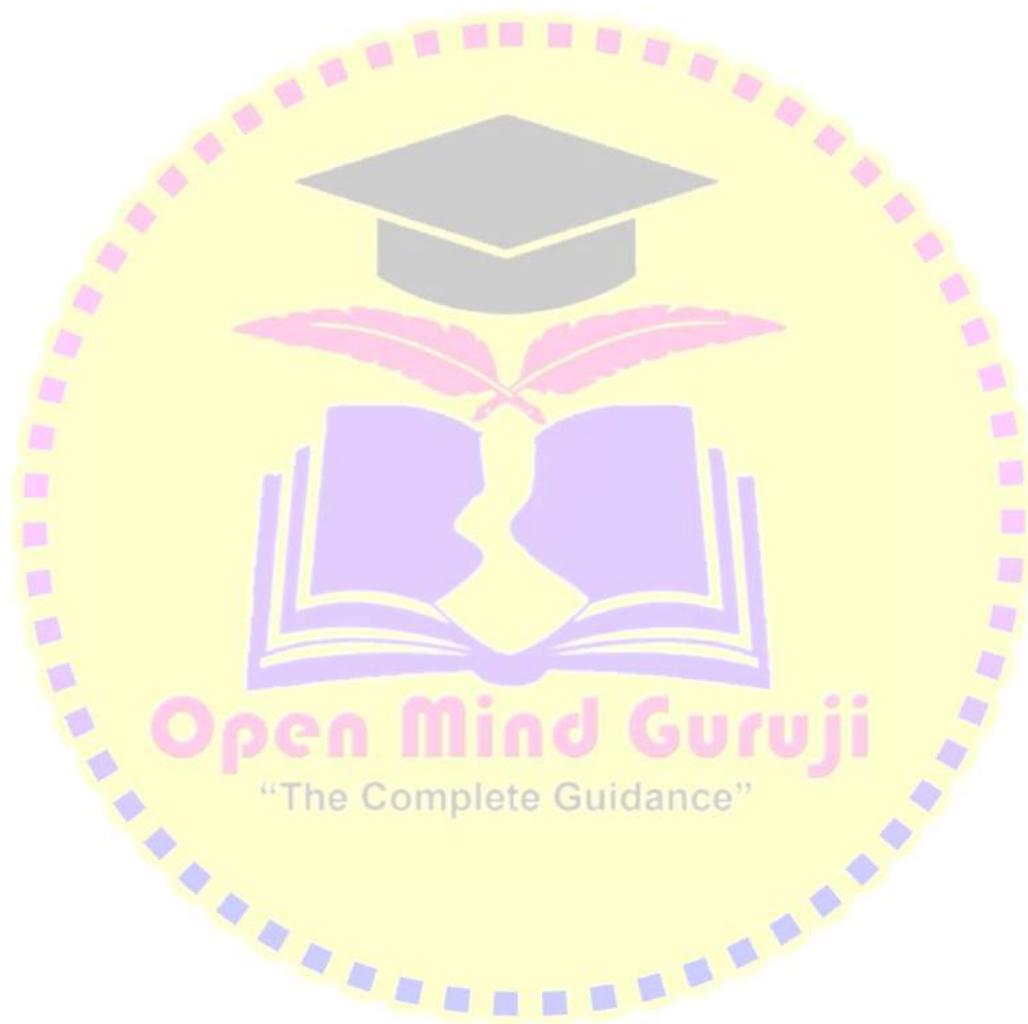
Subscribe

For More Updates

# Engineering Drawing

ITI 1<sup>st</sup> Year, Common For All Engineering Trade

---



---

Solutions and Explanation on  
YouTube Channel

