

Curs 3

- **Stergerea unei portiuni exacte dintr-o entitate: comanda BREAK**
- **Racordarea a doua entitati cu arc de raza impusa: comanda FILLET**
- **Tesirea (taierea unui colt): comanda CHAMFER**
- **Trasarea unei paralele a unei entitati date (deplasarea entitatii): comanda OFFSET**
- **Intinderea unei portiuni de desen: comanda STRETCH**
- **Afisarea elementelor caracteristice ale unei entitati: comanda LIST**
- **Afisarea ariei unui poligon: comanda AREA**

- **Stergerea unei portiuni exacte dintr-o linie**

Command: BREAK

Select object: S1 (punct pe linia de ajustat)

Enter second point (or F for First point): F

Enter first point: P1 (primul punct la portiunii de sters)

Enter second point: P2 (punctul de capat al portiunii de sters)

- ✓ **Stergerea unei portiuni exacte dintr-un cerc (sau arc)**

Command: BREAK

Select object: S1 (punct pe cercul de ajustat)

Enter second point (or F for First point): F

Enter first point: P1 (primul punct la portiunii de sters)

Enter second point: P2 (punctul de capat al portiunii de sters)

Stergerea se executa in sens trigonometric, dinspre primul spre al doilea punct selectat

- **Racordarea a doua entitati cu arc de raza impusa: comanda FILLET**

✓ **Racordarea a doua linii, doua cercuri, doua arce**

-cand raza impusa este <0>, cele doua entitati se intersecteaza

Command: FILLET

Polyline/Radius/<Select two objects>: R

Enter fillet radius <1>: 10

Command: FILLET

Polyline/Radius/<Select two objects>: S1 S2

✓ **Racordarea unei polylinii**

Command: FILLET

Polyline/Radius/<Select two objects>: R

Enter fillet radius <1>: 10

Command: FILLET

Polyline/Radius/<Select two objects>: P

Select 2D plyline: S1 (punct pe polylinie)

Se vor racorda toate segmentele polyliniei

➤ **Tesirea (taierea unui colt): comanda CHAMFER**

✓ **Tesirea (taiere) la unghi de 45° (cu distante egale)**

Command: CHAMFER

Polyline/Distance/<Select first line>: D

Enter first chamfer distance <0>: 15

Enter second chamfer distance <15>: ↵

✓ **Tesirea la distante diferite pe muchiile coltului**

Command: CHAMFER

Polyline/Distance/<Select first line>: D

Enter first chamfer distance <0>: 15

Enter second chamfer distance <15>: 5

Command: ↵

Polyline/Distance/<Select first line>: S1 (punct pe prima muchie a coltului de tesit)

Enter second line: S2 (punct pe a doua muchie a coltului)

✓ **Tesirea unei polylinii**

Command: CHAMFER

Polyline/Distance/<Select first line>: D

Enter first chamfer distance <15>:↵

Enter second chamfer distance <15>: ↵

Command: ↵

Polyline/Distance/<Select first line>: P

Select 2D polyline: S1 (punct pe polylinie)

Se vor tesi toate colturile polyliniei

➤ **Trasarea unei paralele a unei entitati date (deplasarea entitatii): comanda OFFSET**

-entitatea poate fi: linie, arc, cerc, polylinie

✓ **Trasarea unei linii paralele unei linii date prin punct impus: comanda OFFSET**

Command: OFFSET

Offset distance or Trough <5>: T

Select object to offset: S1 (punct pe linia fata de care se construiește paralela)

Trough point: P1 (punctul prin care va trece paralela; se marcheaza prin cursorul grafic)

Select object to offset: CTRL/C

✓ **Trasarea unei linii paralele unei linii date situata la o distanta impusa**

Command: OFFSET

Offset distance or Trough < Trough >: 5

Select object to offset: S1 (punct pe linia initiala)

Side to offset?: P1 (punct in zona din plan in care se va situa paralela)

Select object to offset: CTRL/C

➤ **Intinderea unei portiuni de desen: comanda STRETCH**

Command: STRETCH

Select object to stretch: W (fereastra care inchide portiunea de intins))

Select object: C (optiunea de a intinde portiunea delimitatata –taiata- de fereastra)

First corner: P1 (primul colt al ferestrei)

Other corner: P2 (alt colt diagonal al ferestrei)

Select object: ↵

Base point: P3 (un punct in zona desenului in care se face intinderea)

New point: P4 (punct final pana la care se face intinderea)

Daca este activat modul ORTHO, intinderea se face numai pe directia paralela/perpendiculara unei dimensiuni a zonei de intins)

➤ **Afisarea elementelor caracteristice ale unei entitati: comanda LIST**

✓ **Afisarea caracteristicilor unui segment de linie**

Command: LIST

Select object: S1 (punct pe linie)

Select object: ↵

LINE Layer: 0

From point, x=10.00 y=10.00 z=0.00

To point, $x=20.00$ $y=30.00$ $z=0.00$

Length: 22.36, Angle in X-Y plane = 63.43

$\Delta x=10.00$ $\Delta y=20.00$ $\Delta z=0.00$

✓ **Afisarea caracteristicilor unui cerc**

Command: LIST

Select object: S1 (punct pe cerc)

Select object: ↵

CIRCLE Layer:0

Center point, $x=50.00$ $y=50.00$ $z=0.00$

Radius 20.00

Circumference=125.66, Area=1256.64

Informatiile afisate de comanda LIST sun in spatiul "text"; revenirea la spatiul de desen se face cu F1,

✓ **Afisarea distantei dintre doua puncte**

Command: LIST

First point: P1

Second point: P2

Distance=50, Angle in X-Y plane=36.87

Angle from X-Y plane=0.00

$\Delta X=40$ $\Delta Y=30$ $\Delta Z=0$

✓ **Afisarea coordonatelor unui punct**

Command: ID

Point : P1

$X=140$ $Y=70$ $Z=0$

✓ **Afisarea originii si mijlocului unei linii**

Command: ID

Point: END of (S1=primul punct al liniei)

X=10 Y=10 Z=0

Command: ↵

ID Point: MID of (S2 mijlocul liniei)

X=15 Y=15 Z=0

➤ **Afisarea ariei unui poligon: comanda AREA**

Command: AREA

<First point>/Entity/Add/Subtract: INT of (P1 un varf al poligonului)

Next point: P2 (urmatorul varf)

Next point : P3 (urmatorul varf)

.....

Next point: ↵

Area=500 , Perimeter=120

✓ **Determinarea unei arii complexe**

Command: AREA

<First point>/Entity/Add/Subtract: A

<First point>/Entity/Add/Subtract: INT of (primul varf al unui contur)

(ADD mode) Next point: INT of (urmatorul varf)

.....

(ADD mode) Next point: ↵

Area=1600, Perimeter=160

Total area=1600

<First point>/Entity/Add/Subtract: S

(SUBSTRACT mode) Select circle or polyline: S1 (punct pe un contur in interiorul celui initial)

Area=314.16, Circumference=62.83

Total area= 1259.60 (diferenta ariilor celor doua contururi)

(SUBSTRACT mode) Select circle or polyline: ↵

<First point>/Entity/Add/Subtract: ↵

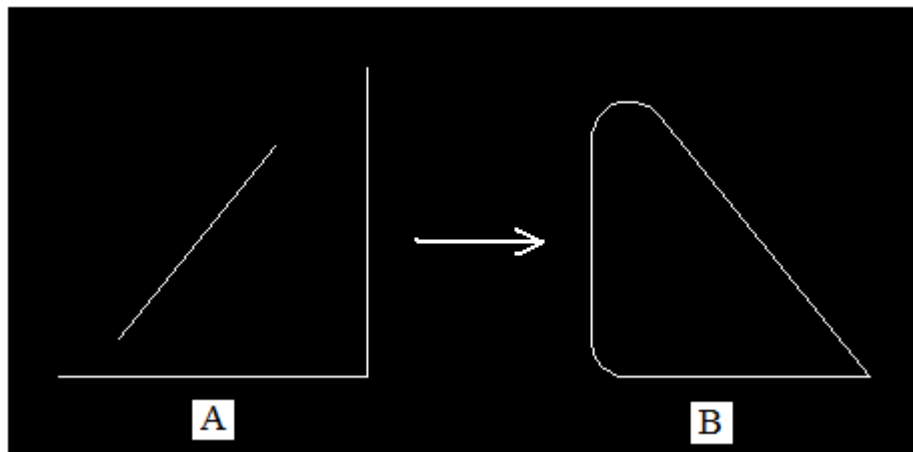
Exercitii (spatiul de desen: 297,210)

➤ **Exercitiul I**

- ✓ Sa se construiasca desenul A: line→(180,80) →@40,0→@0,40 si

Line: (188,85) →@30,20

- ✓ Sa se construiasca desenul B: utilizand succesiv comenzile MIRROR, FILLET (Radius=5)

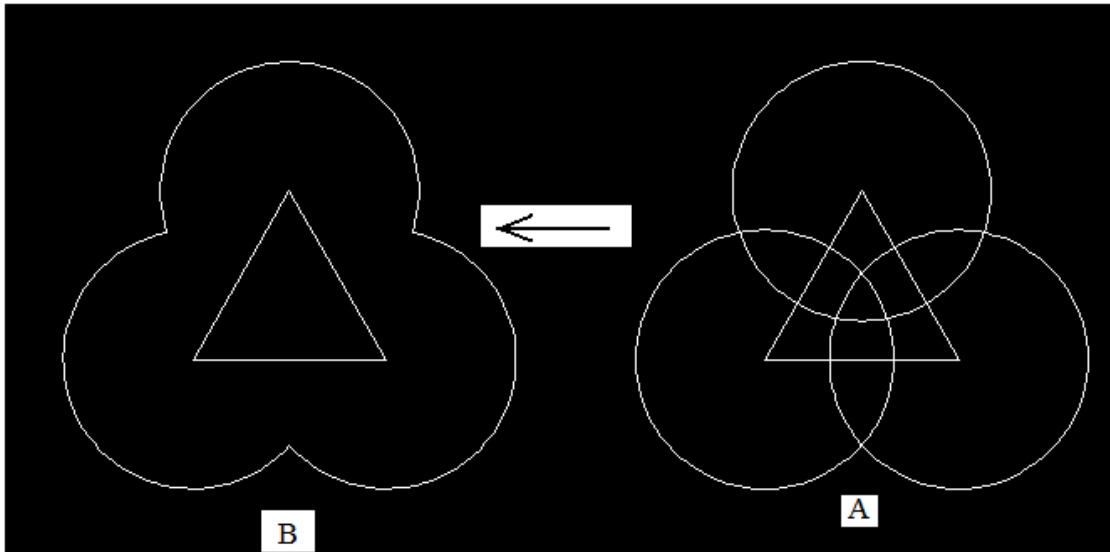


Exercitiul I

➤ **Exercitiul II**

- ✓ Sa se construiasca desenul A: line: (80,80) →@30,0→@30<120→c si
Circle: center:int of (succesiv, in fiecare varf al triunghiului), radius=30

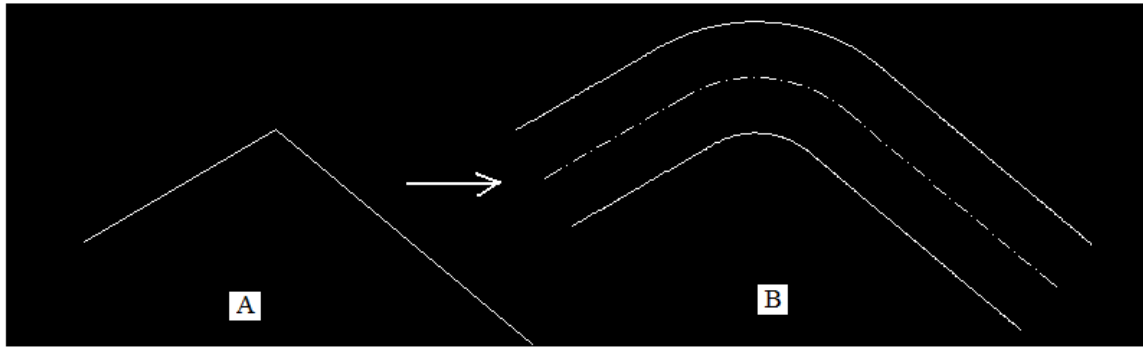
- ✓ Sa se construiasca desenul B, utilizand succesiv comenzile: MIRROR, BREAK (pentru portiuni de cerc)



Exercitiul II

➤ Exercitiul III

- ✓ Sa se construiasca desenul A: line: (60,60) →@40<30@60<-40
- ✓ Sa se construiasca desenul B, utilizand succesiv comenzile: COPY, FILLET (Radius=15), OFFSET (Trough=10), OFFSET (Trough=10), CHANGE (properties Ltype (Dashdot), CHANGE (properties Ltscale=5)



Exercitiul III