

TIMAH
POLITEKNIK MANUFAKTUR

GTM2

**GAMBAR
TEKNIK
MESIN**

POLITEKNIK MANUFAKTUR TIMAH (POLMAN - TIMAH)
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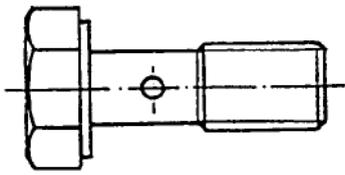
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MATERI II

2. PANDANGAN PROYEKSI & PERSPEKTIF

- **Pandangan Utama**
- **Perspektif Parallel**
- **Proyeksi Amerika & Eropa**



2.1. Tampak/pandangan

TAMPAK/PANDANGAN adalah merupakan gambar yang menjelaskan suatu benda yang dilihat secara frontal.

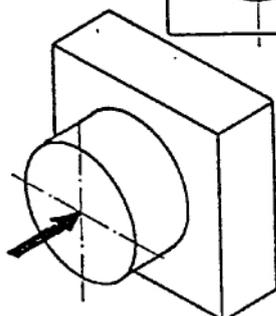
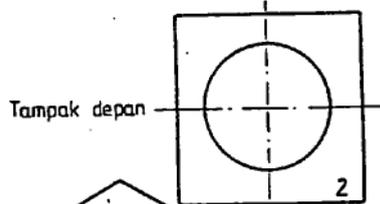
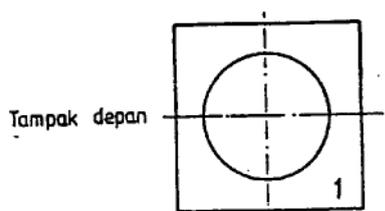
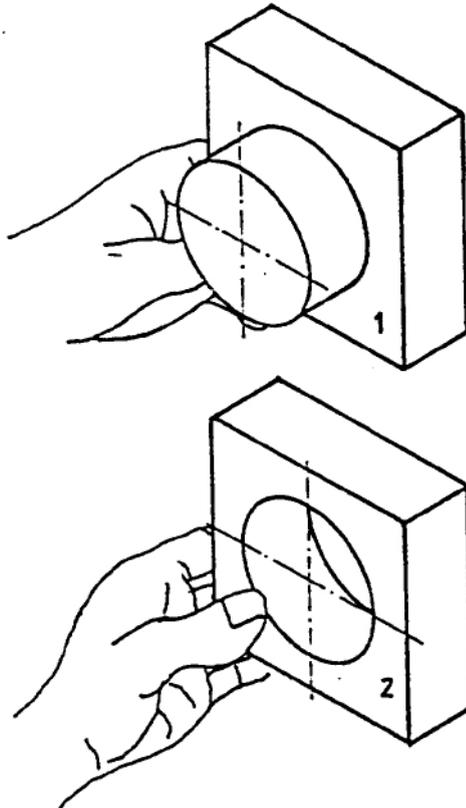
Dalam Gambar Teknik, benda kerja hanya digambarkan dalam beberapa pandangan yang diperlukan, (jangan digambar dalam pandangan yang berlebihan).

Bila perlu benda kerja digambarkan dalam beberapa pandangan, karena tidak sedikit benda kerja yang berbeda mempunyai pandangan yang sama.

Seperti pada contoh Gambar benda kerja disamping ini, benda 1 dan 2 mempunyai bentuk yang berbeda, tapi bila anda lihat dari pandangan depannya saja, kedua benda tersebut mempunyai pandangan yang sama.

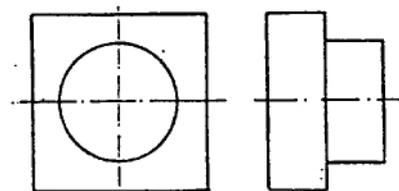
Bila benda 1 dan 2 tersebut, hanya digambarkan dalam pandangan depannya saja, kemungkinan akan terjadi kekeliruan dalam pembacaan gambar.

Maka untuk menghindari kekeliruan pembacaan ini, benda tersebut harus digambarkan pandangan lainnya (misalnya pandangan samping atau pandangan atas). Dengan demikian kesalahan pembacaan Gambar akan terhindari.



2.1.1. PANDANGAN UTAMA

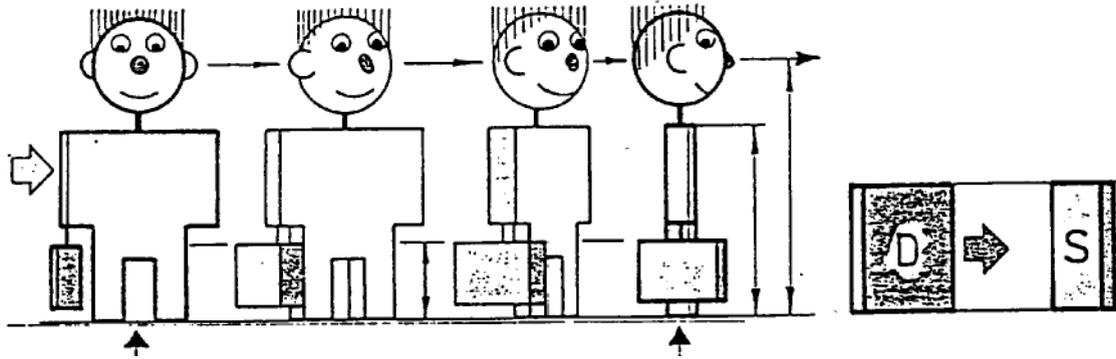
- Pandangan Depan
- Pandangan Samping
- Pandangan Atas



Depan

Samping

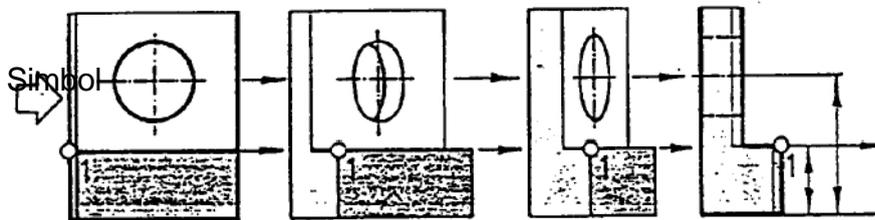
Dari Pandangan Depan ke Pandangan Samping.



Pandangan Depan

Pandangan Samping

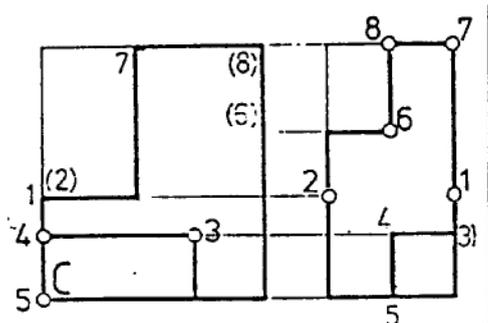
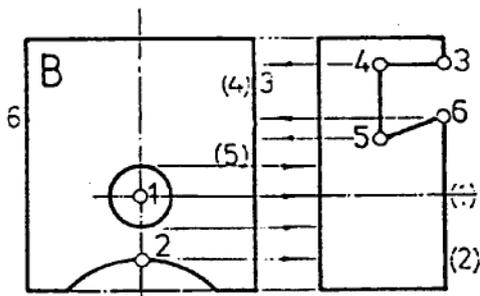
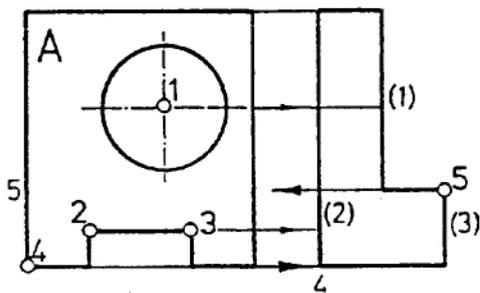
D. Pandangan depan
S. Pandangan samping



Metoda Eropa

Simbol

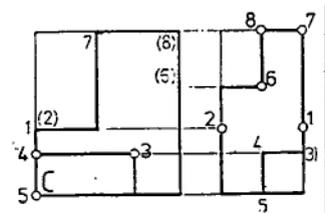
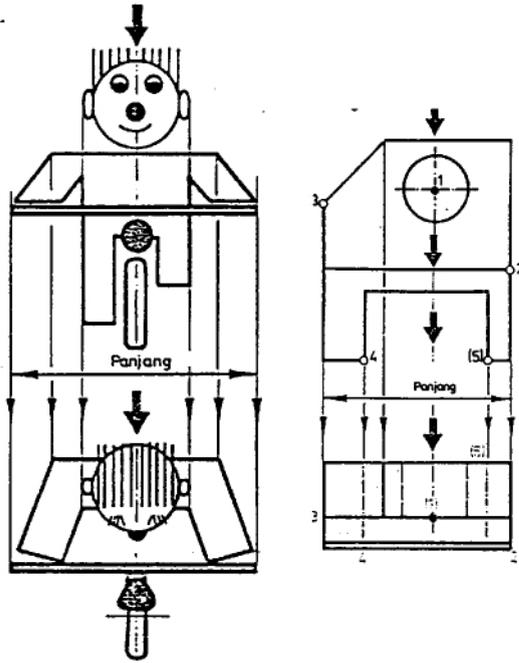
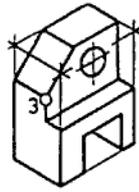
Latihan :
Lengkapi Gambar benda AB, dan C disamping ini. (Gunakan tinta merah).



Dari Pandangan Depan

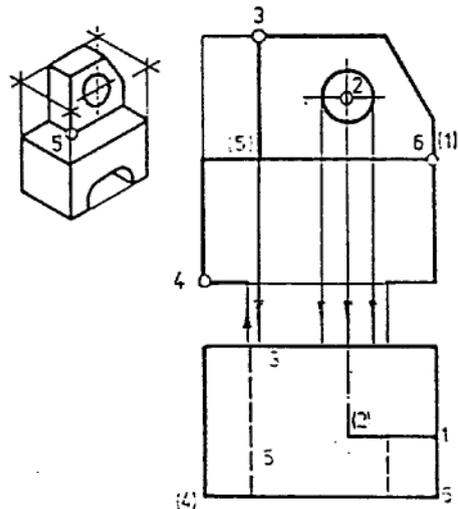
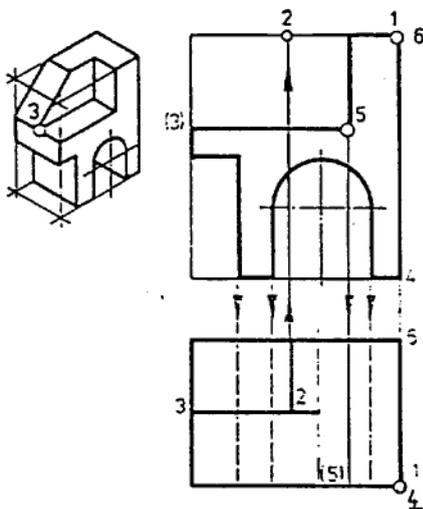
ke

Pandangan atas



D = Pandangan Depan
A = Pandangan Atas.

Latihan : Lengkapi gambar dibawah ini. (Gunakan tinta merah).

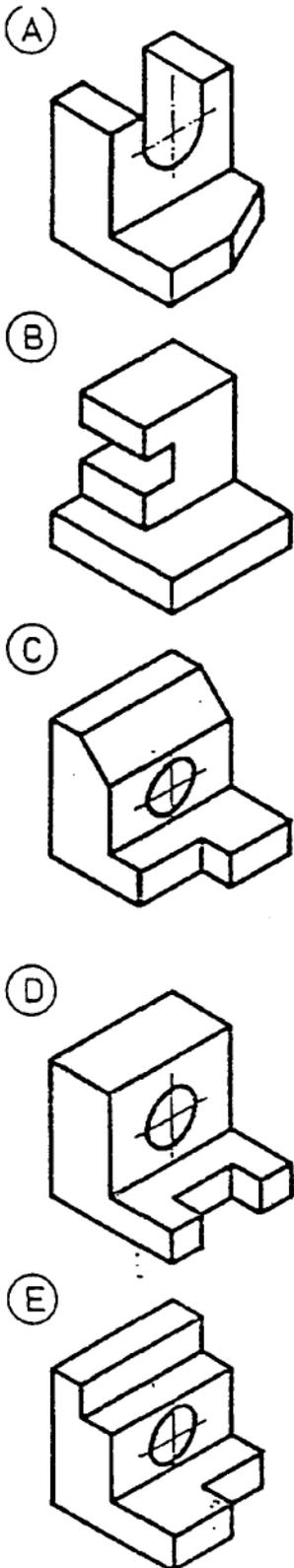


Perspektif

Gambar 3 Dimensi

Pandangan Samping

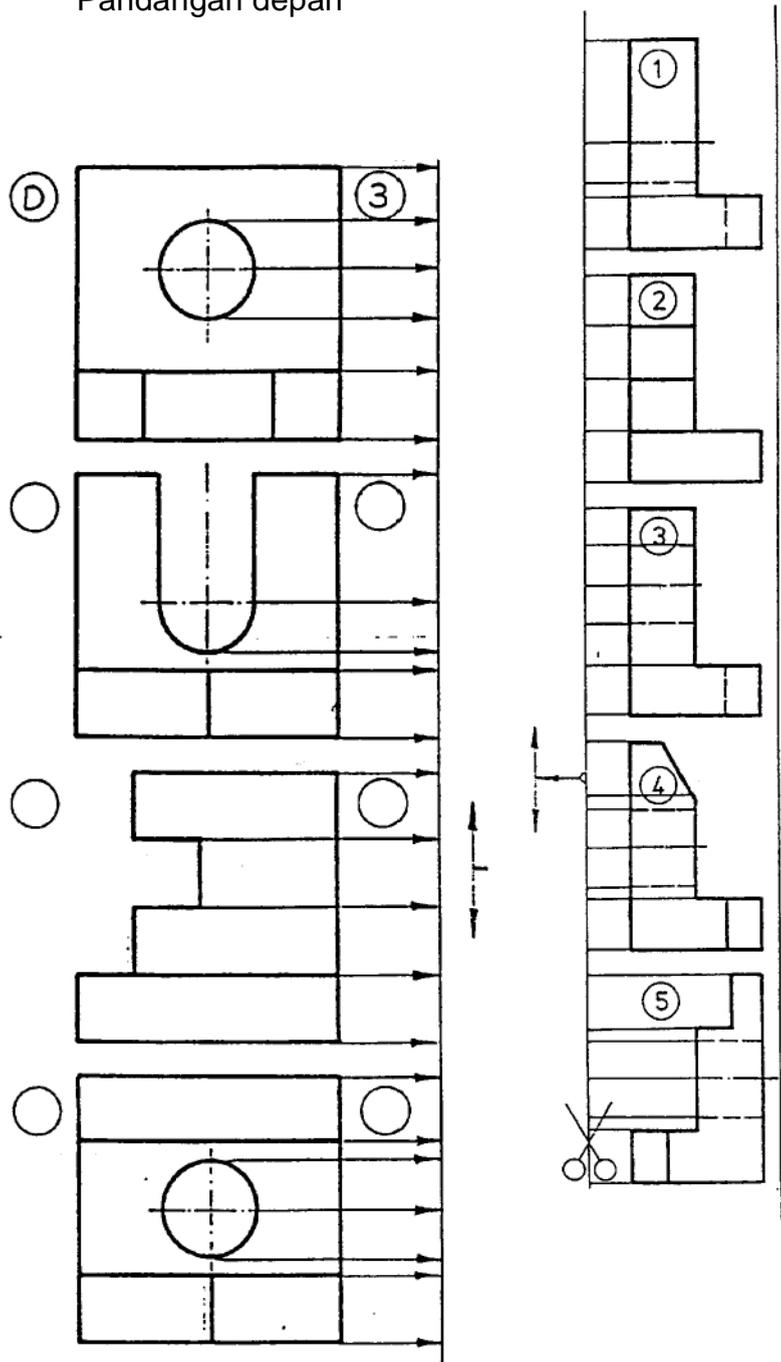
Perspektif

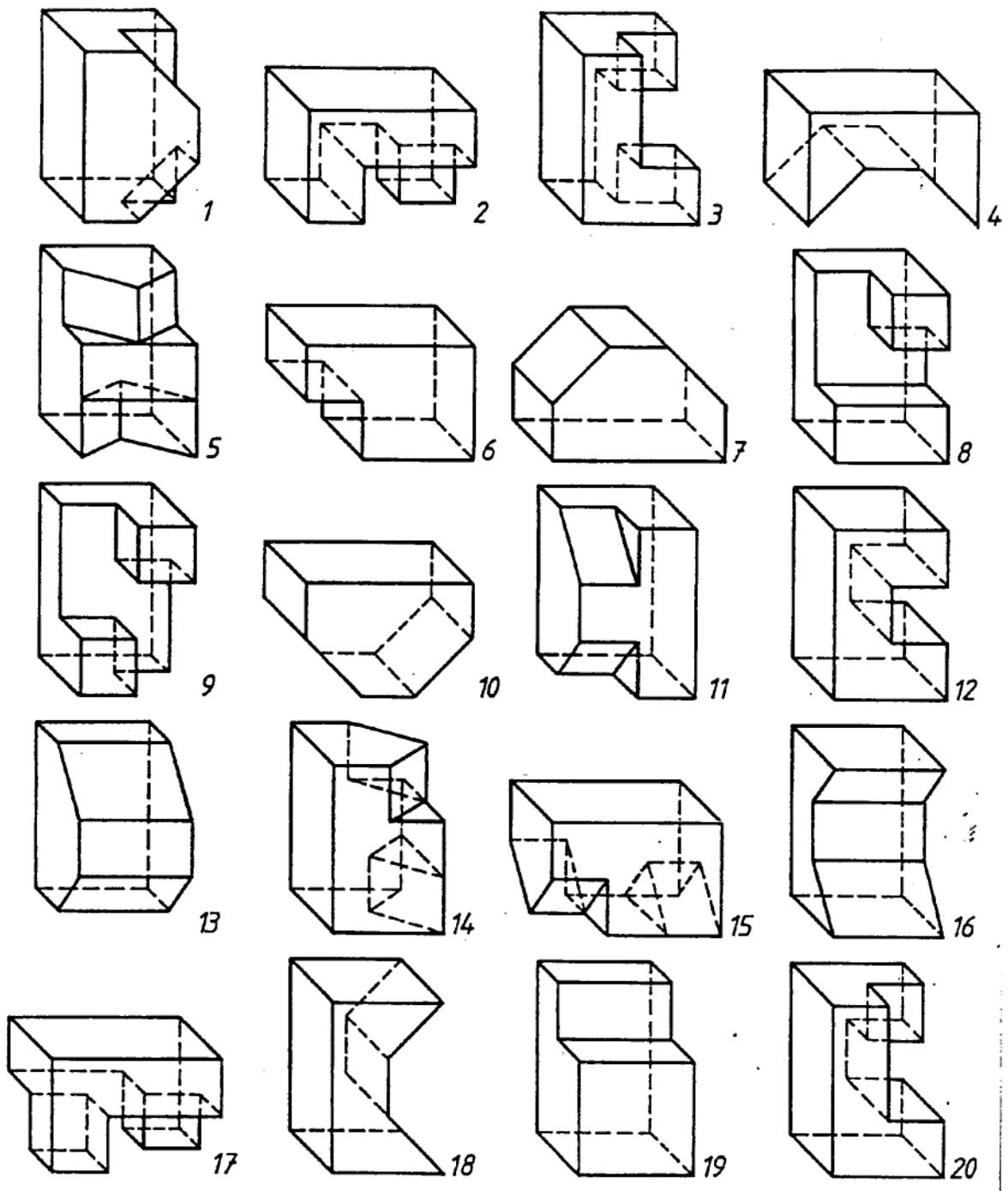


Tugas :

Cantumkan huruf gbr. 3 dimensi & angka pandangan samping yang sesuai untuk pandangan samping yang sesuai untuk pandangan depan dibawah ini.

Pandangan depan





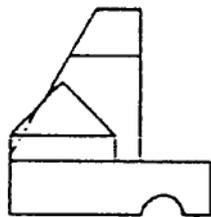
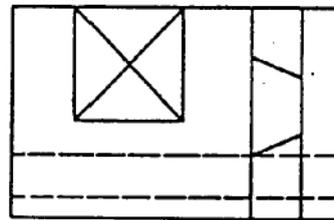
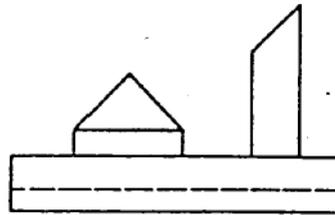
Tugas :

Gambar di atas menunjukkan 8 buah benda yang berbeda dalam pandangan yang berbeda, susunlah setiap benda yang sama pada tabel yang tersedia di samping !

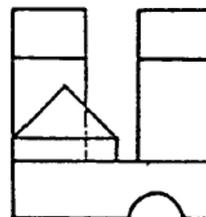
| | | | | | | | |
|-----------|--|--|--|--|--|--|--|
| 1 | | | | | | | |
| 11 | | | | | | | |
| — | | | | | | | |

Pilih pandangan samping yang benar

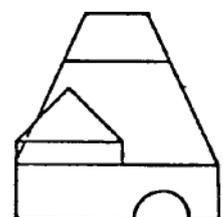
1



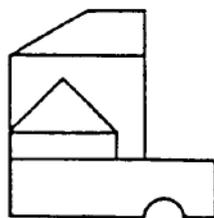
A



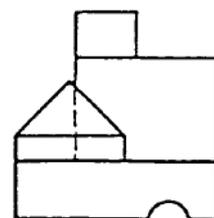
B



C



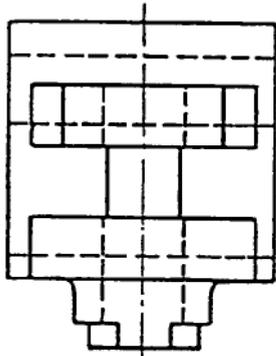
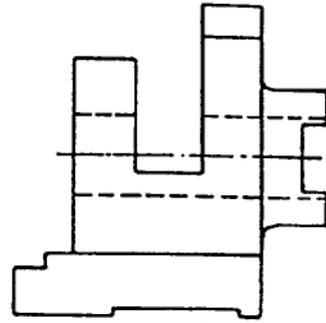
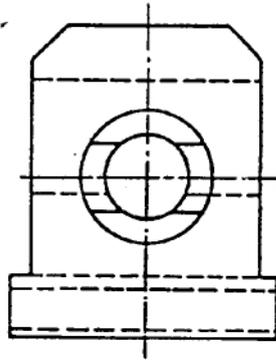
D



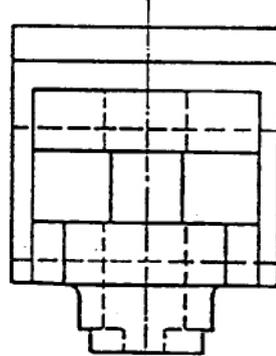
E

Pilih pandangan atas yang benar

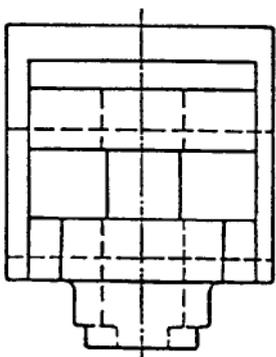
2



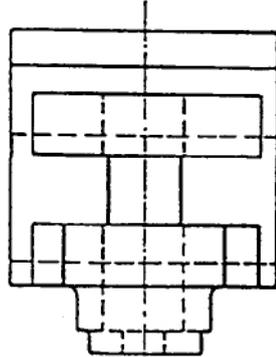
A



B

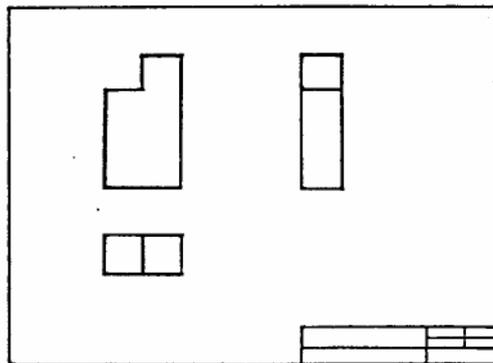
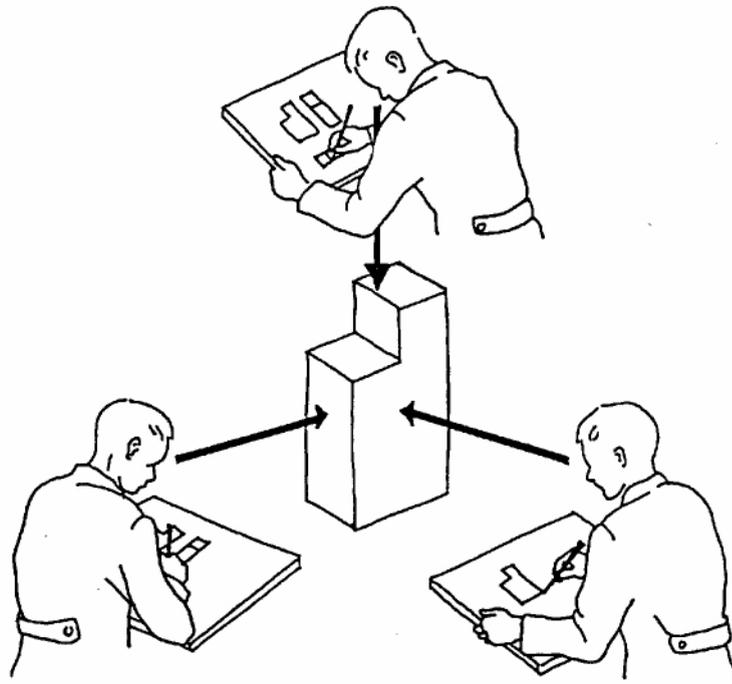


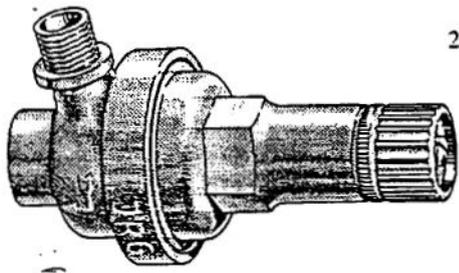
C



D

PERSPEKTIF & PROYEKSI

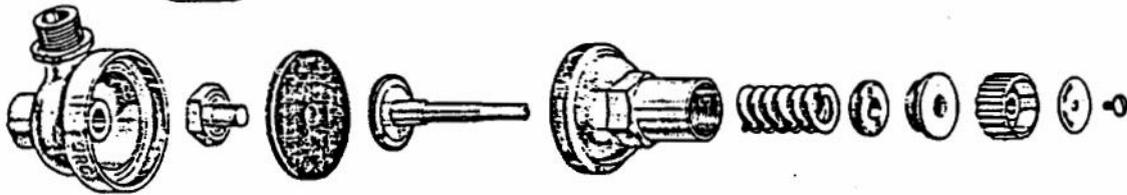




2.

2.2. PERSPEKTIF

PERSPEKTIF adalah penggambaran suatu benda dalam 3 dimensi, yaitu Gambar yang memperlihatkan bentuk sebenarnya dilihat dari sudut pandang.



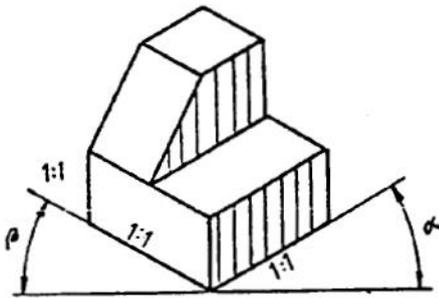
2.2.1. MACAM DAN JENIS PERSPEKTIF

Macam Perspektif yang umumnya digunakan dalam Gambar Teknik mesin adalah "*Perspektif Paralel*" yaitu perspektif dengan garis-garis sejajar.

2.2.2. JENIS PERSPEKTIF PARALLEL

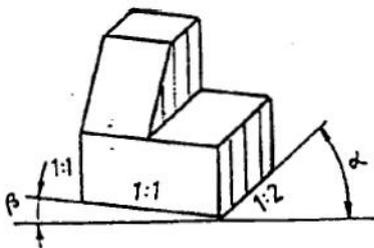
PERSPEKTIF ISOMETRIK
(Isometrik = ukuran yang sama)

Sisi $a:b:c = 1:1:1$
Sudut α dan $\beta = 30^\circ$



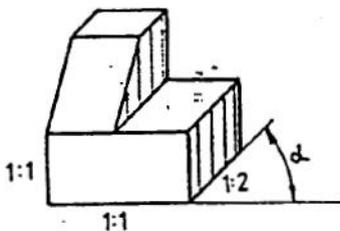
PERSPEKTIF DIMETRIK

Sisi $a:b:c = 1:1:0,5$
Sudut $\alpha = 42^\circ$
 $\beta = 7^\circ$



PERSPEKTIF KAVALLIR

Sisi $a:b:c = 1:1:0,5$
Sudut $\alpha = 45^\circ$
 $\beta = 0^\circ$



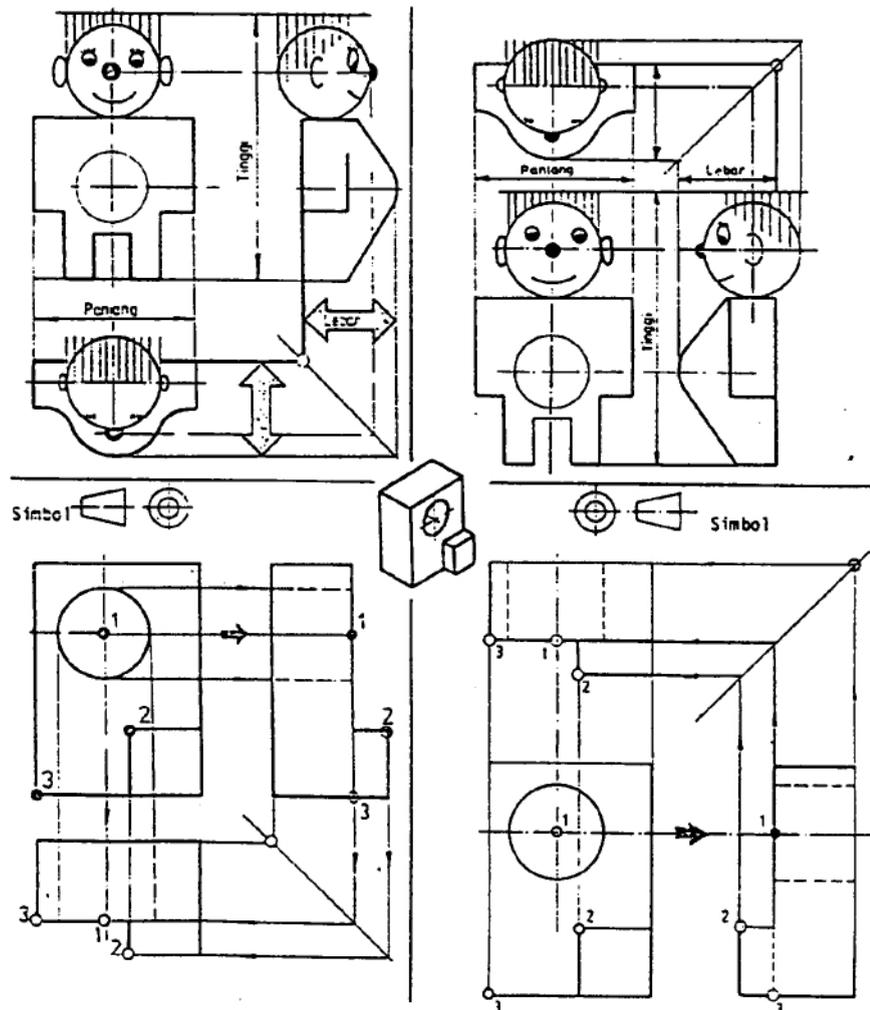
2.3. PROYEKSI

PROYEKSI adalah pandangan suatu bidang benda yang dilihat secara frontal (tegak lurus bidang).

2.3.1. JENIS PROYEKSI

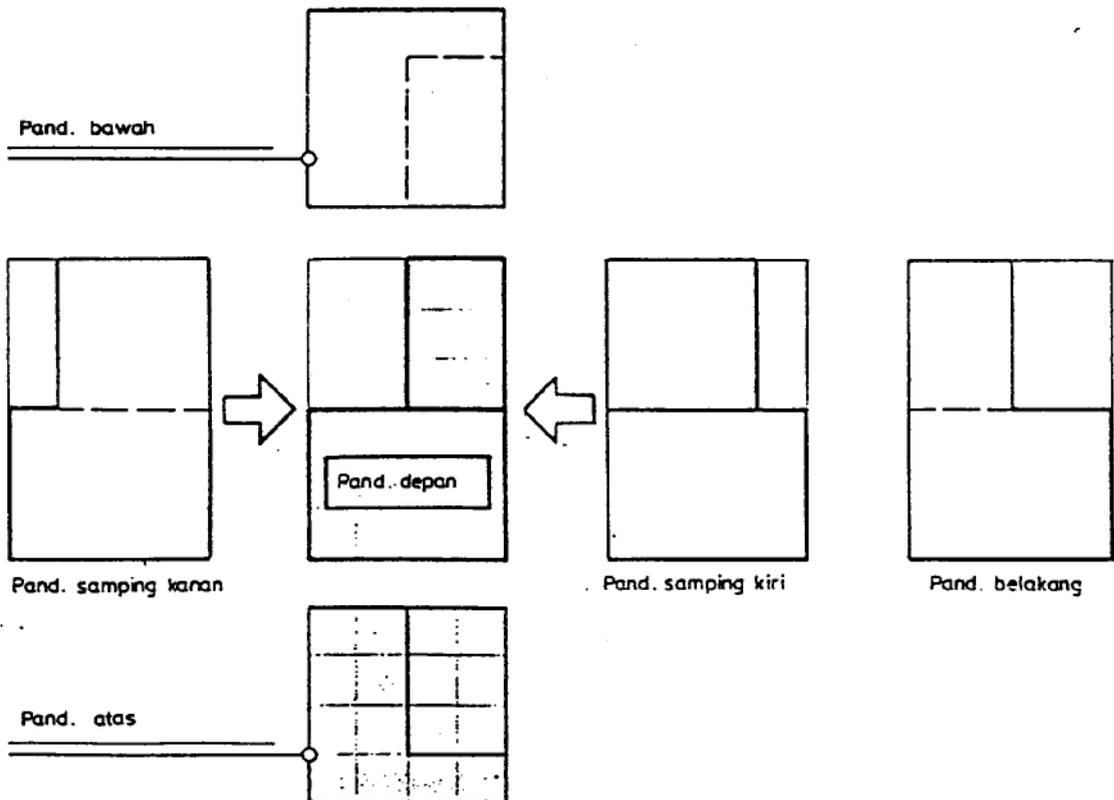
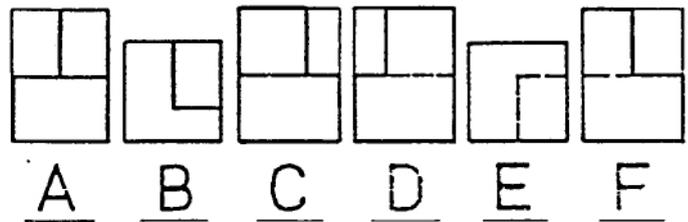
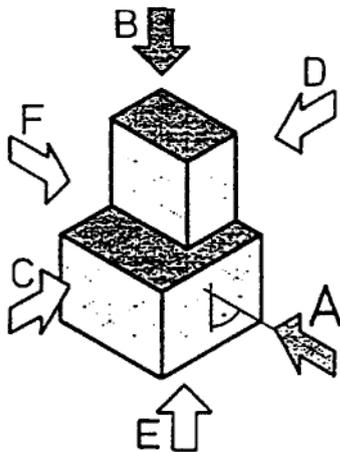
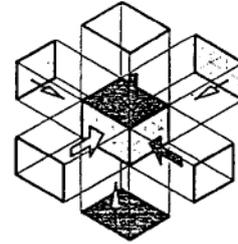
PROYEKSI EROPA, pandangan suatu benda yg dilihat tegak lurus dgn dan digambarkan dibelakang benda tsb.

PROYEKSI AMERIKA, pandangan suatu benda yang dilihat tegak lurus bidang dan digambarkan di depan benda tersebut.

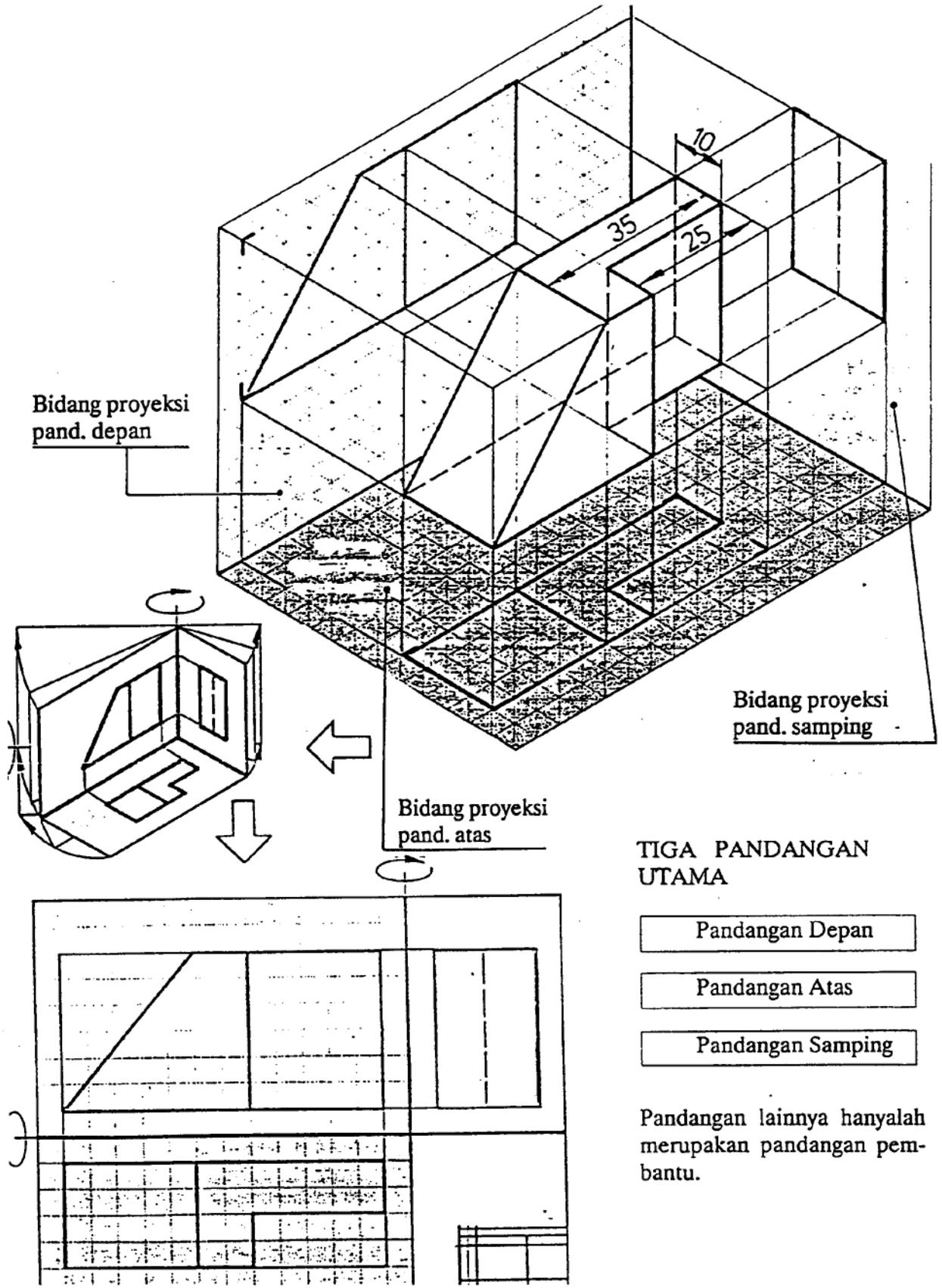


2.3.2. ENAM PANDANGAN PROYEKSI

- A. Pandangan depan.
- B. Tampak atas
- C. Pandangan samping kiri
- D. Pandangan samping kanan
- E. Pandangan bawah
- F. Pandangan belakang



2.3.3. PRINSIP PROYEKSI EROPA/Proyeksi Orthografi



Bidang proyeksi
pand. depan

Bidang proyeksi
pand. samping

Bidang proyeksi
pand. atas

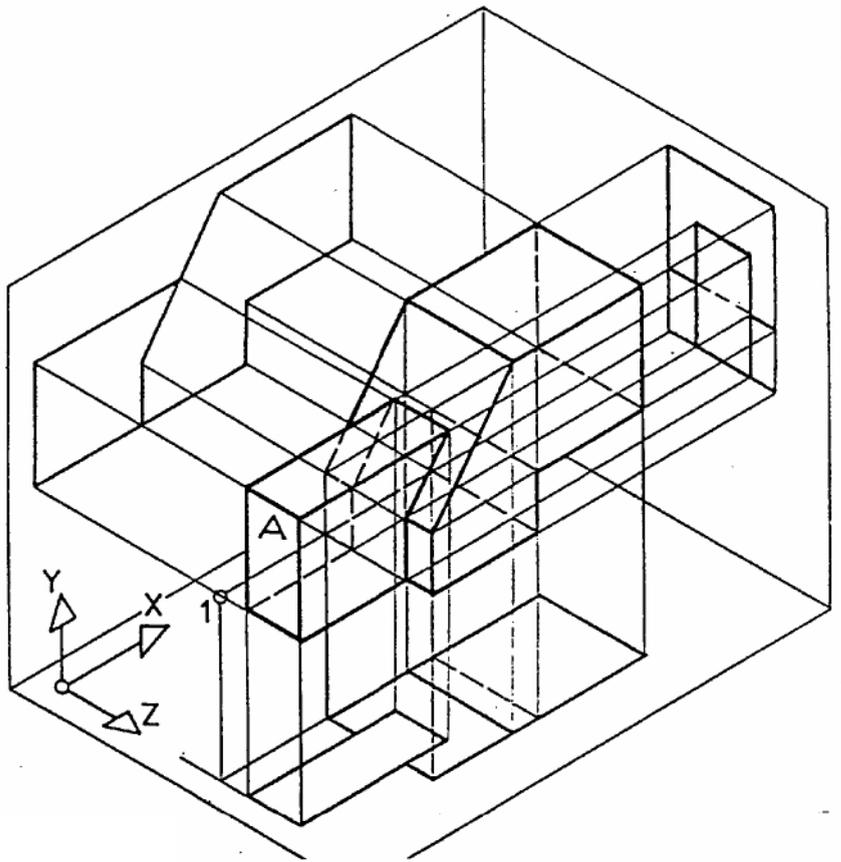
TIGA PANDANGAN
UTAMA

Pandangan Depan

Pandangan Atas

Pandangan Samping

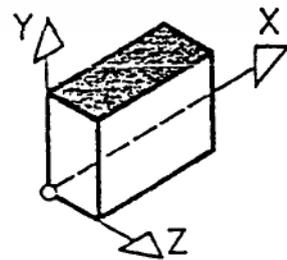
Pandangan lainnya hanyalah
merupakan pandangan pem-
bantu.



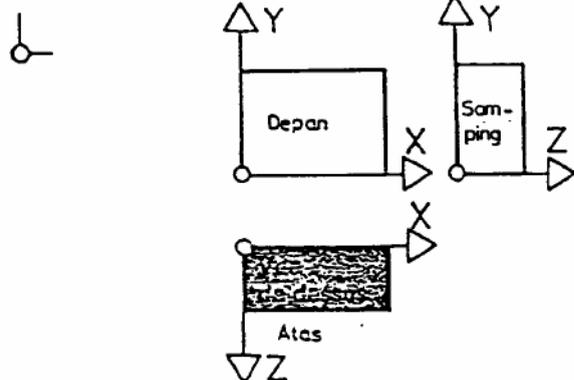
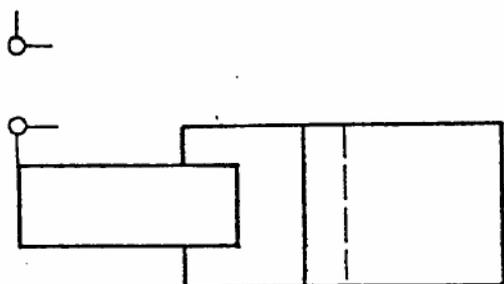
Tugas :

Gambarkan

- Pandangan Depan
 - Pandangan Atas
 - Pandangan Samping
- dari gambar perspektif benda A diatas



$X:Y:Z=1:1:1$



Pilih pandangan yang sesuai dengan arah anak panah pada prespektif disampingnya.

1

A B C D

2

A B C D

3

A B C D

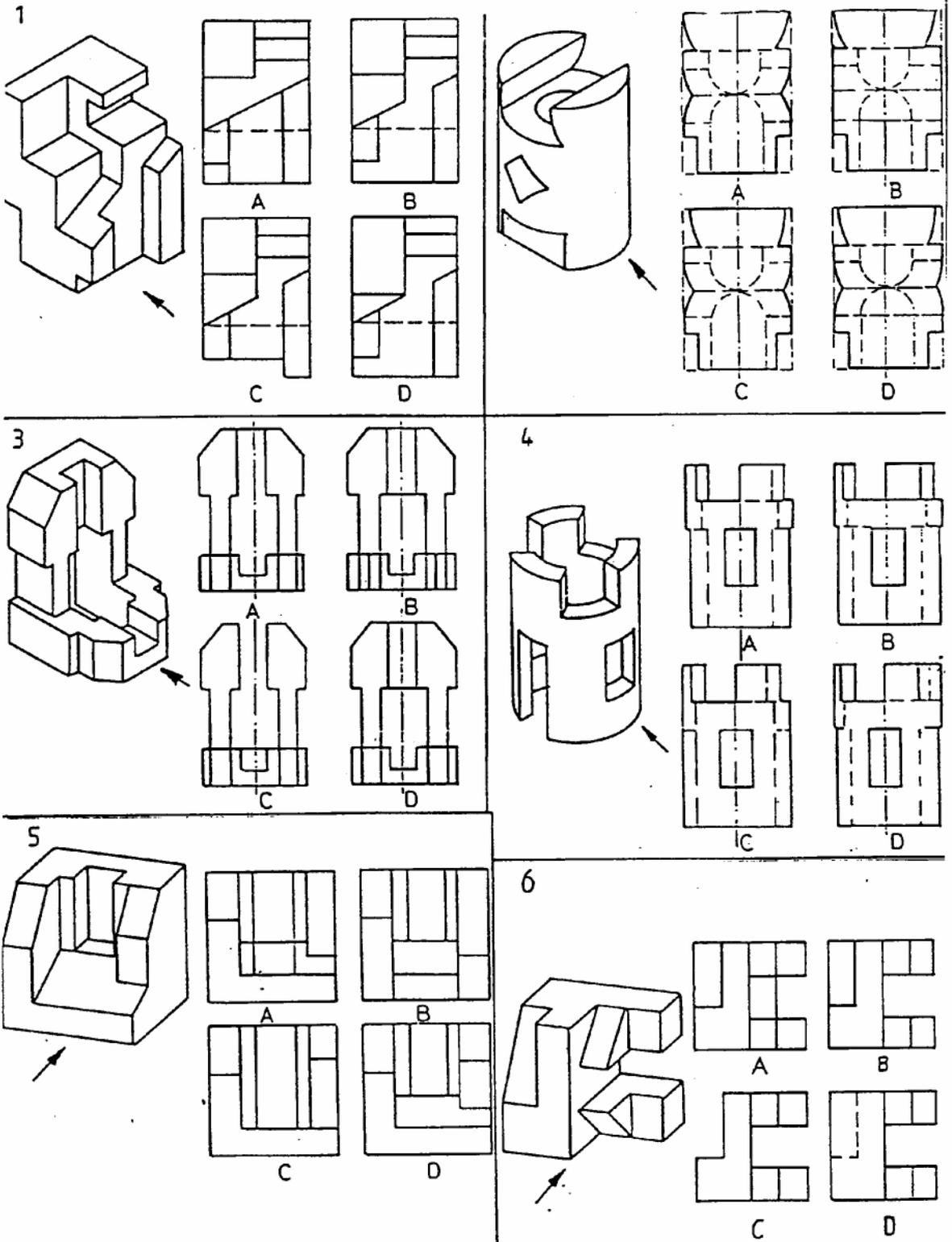
4

A B C D

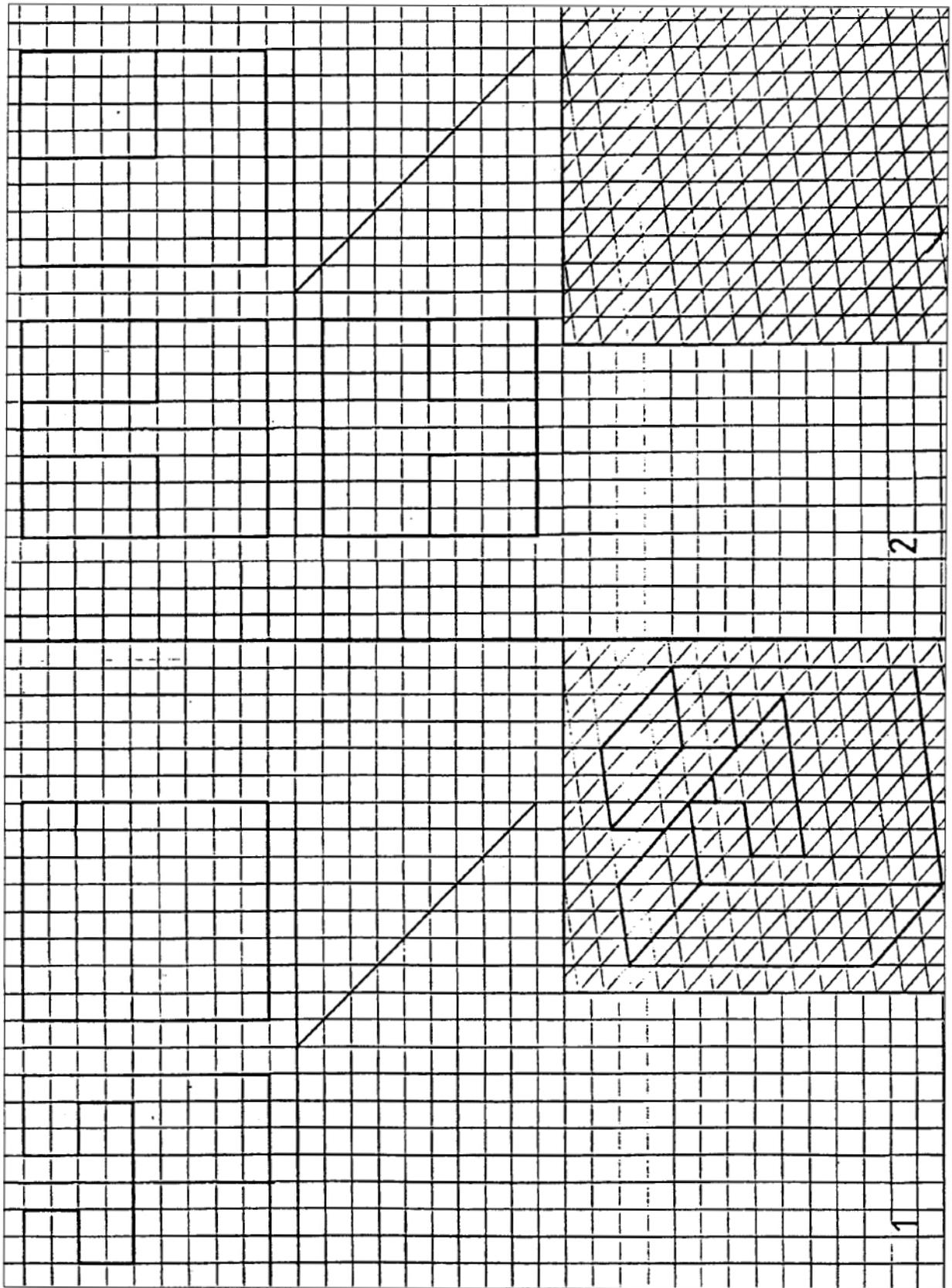
5

A B C D

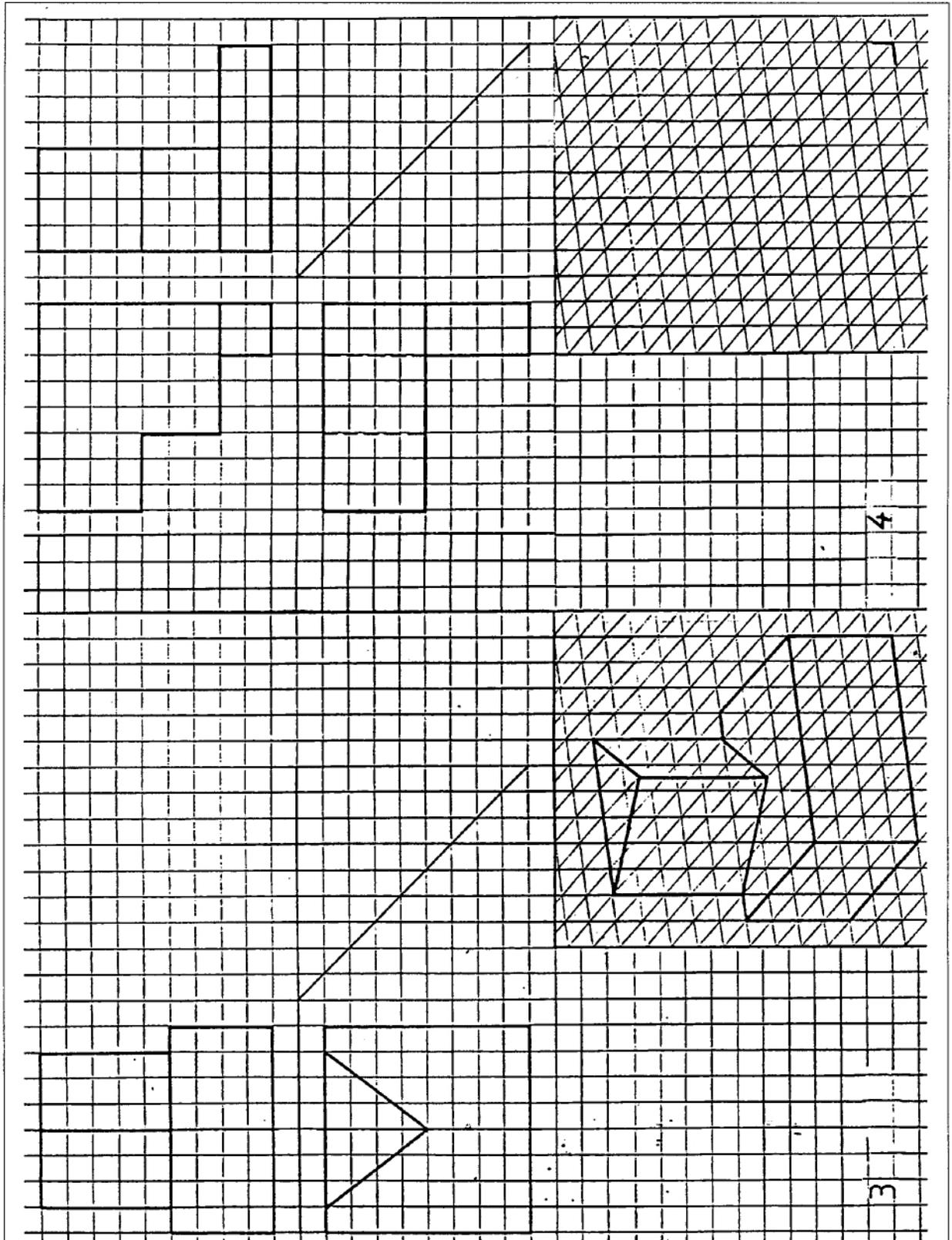
Tentukan Pandangan yang sesuai dengan arah anak panah !



Lembar latihan Lengkapi gambar proyeksi/perspektif di bawah ini.

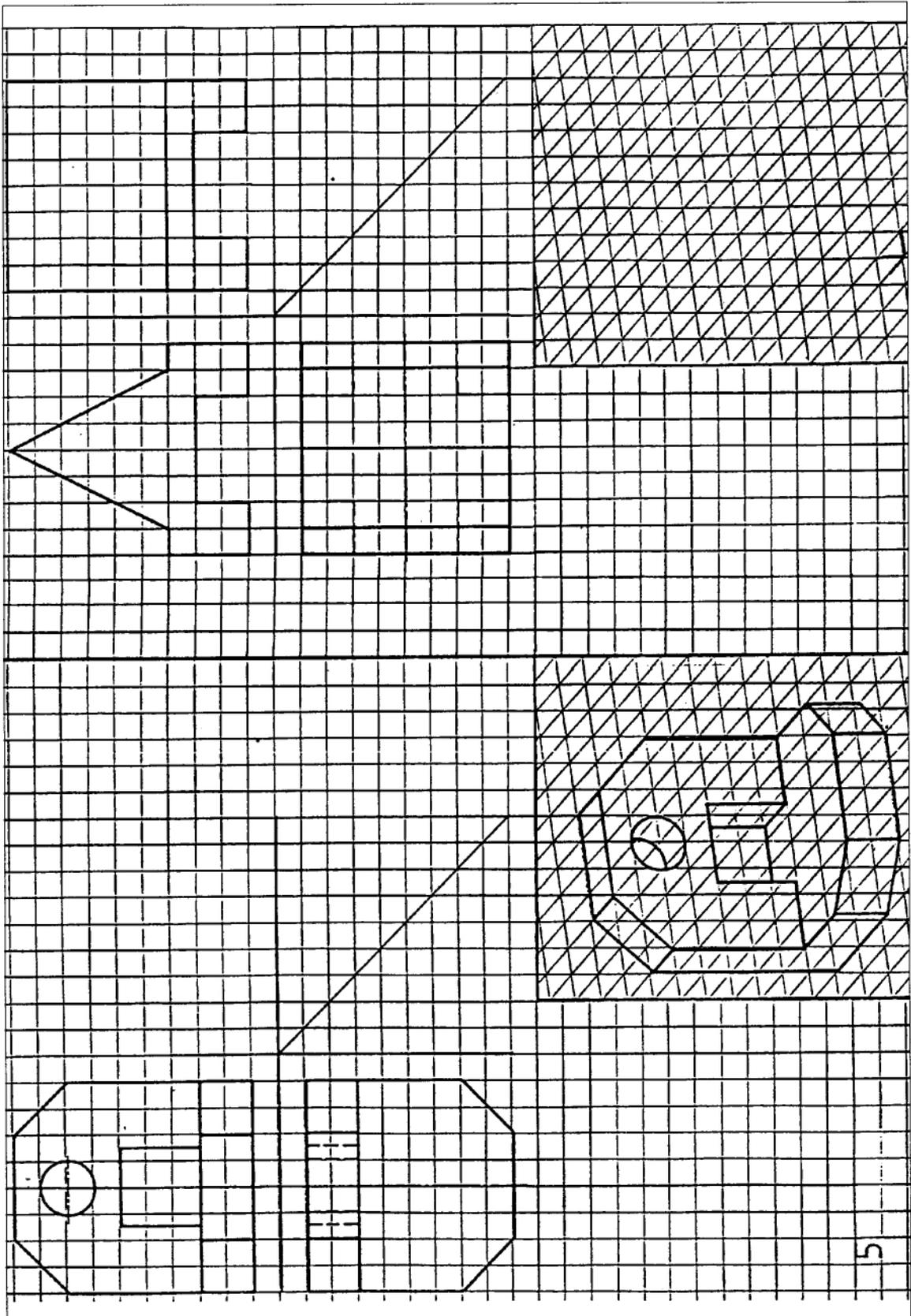


Lembar latihan Lengkapi gambar proyeksi/perspektif di bawah ini.

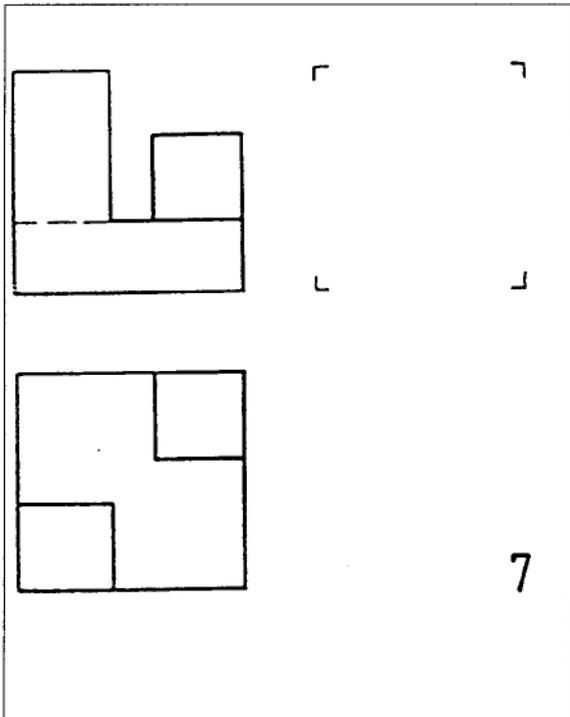
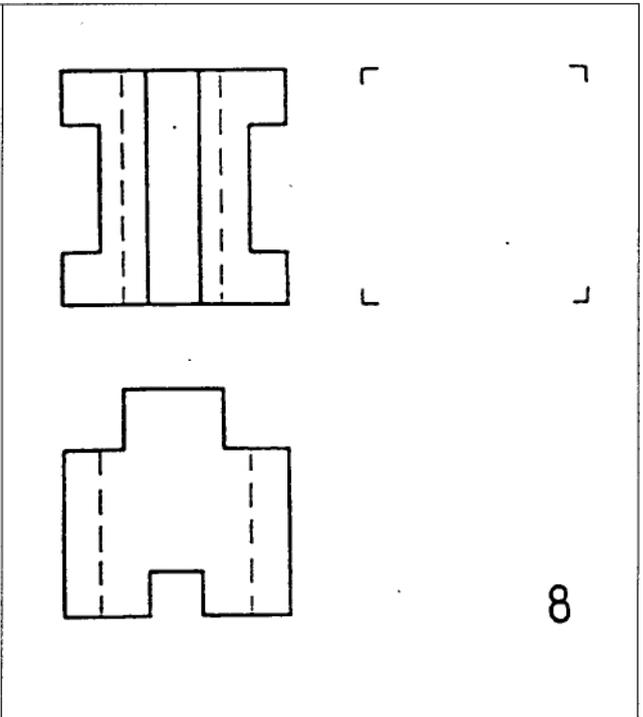
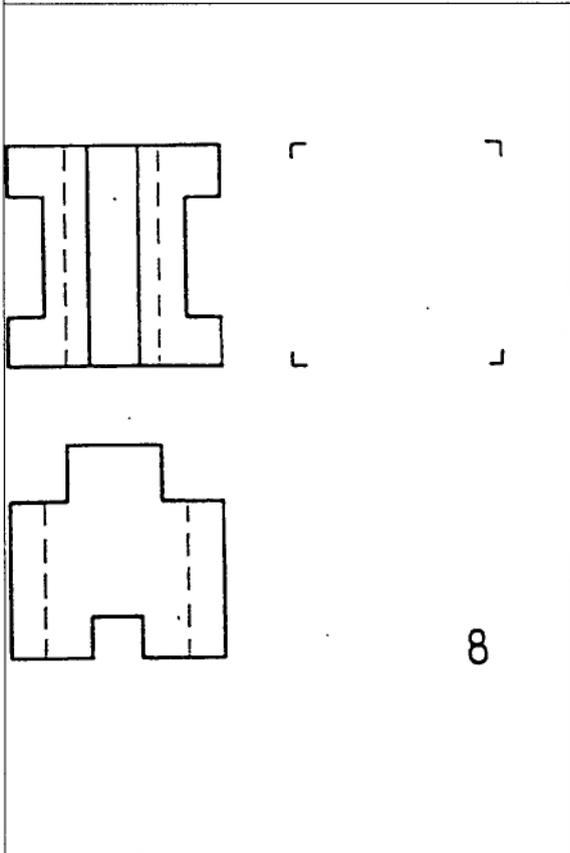
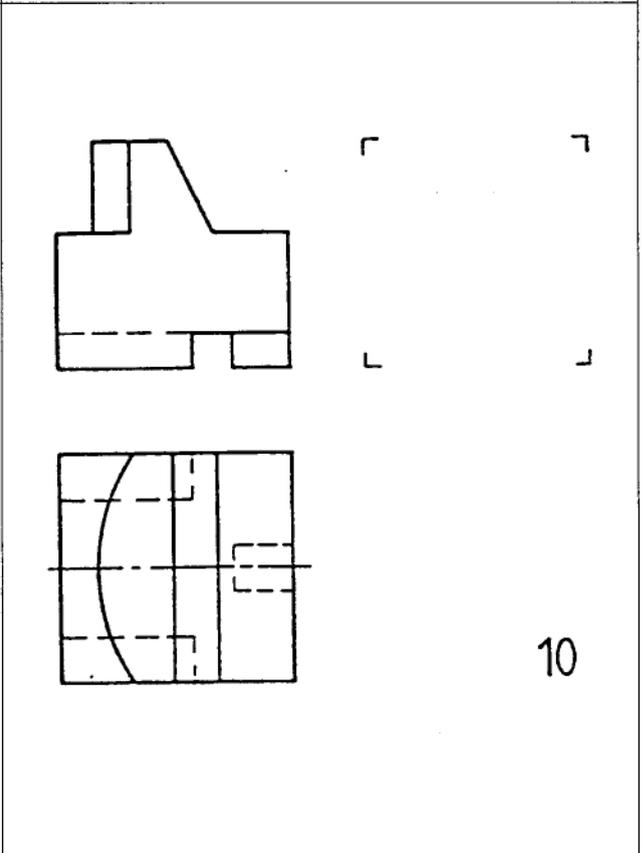


Lembar latihan

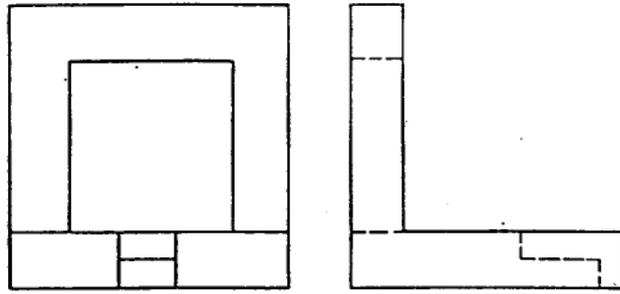
Lengkapi gambar/perspektif di bawah ini.



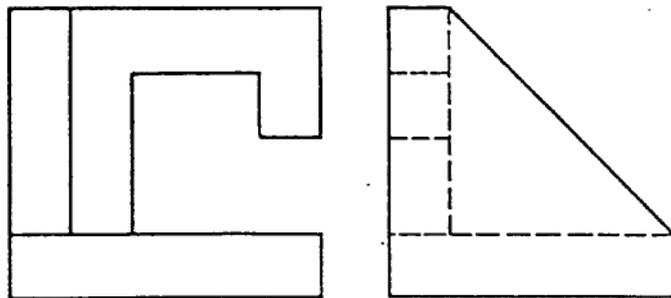
Lengkapi pandangan lainnya yang belum tergambar.

| | |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|  <p>7</p> |  <p>8</p> |
|  <p>8</p> |  <p>10</p> |

Gambarkan pandangnya atasnya.

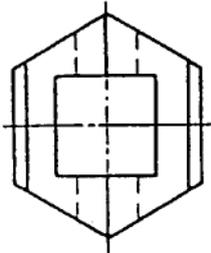
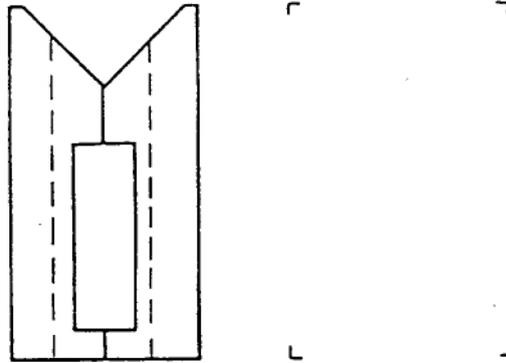


11

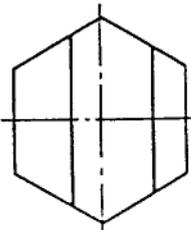
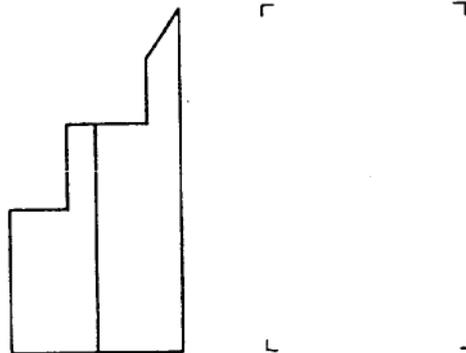


12

Gambarkan pandangan sampingnya.



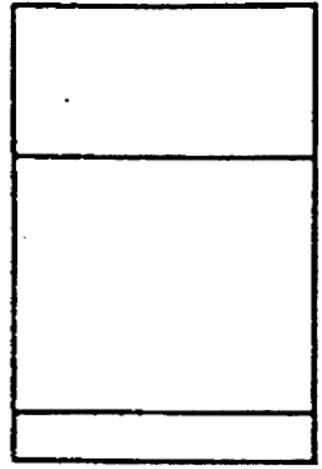
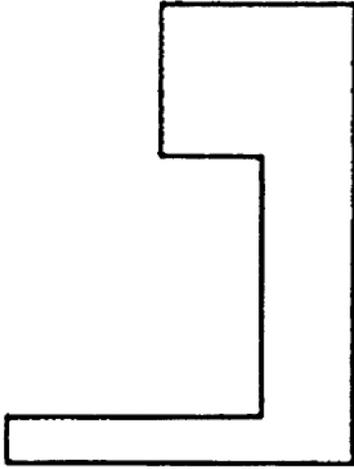
13



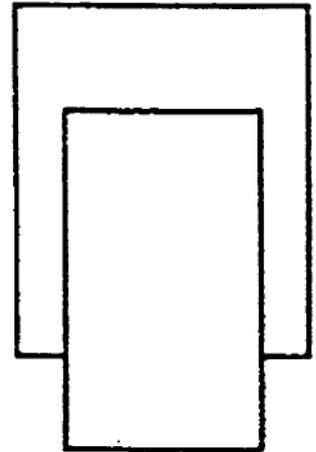
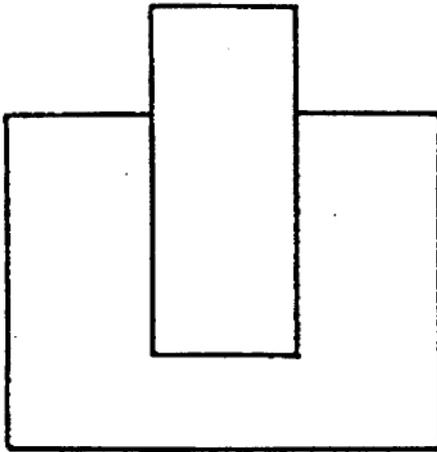
14

Gambarkan perspektif Isometriknya.

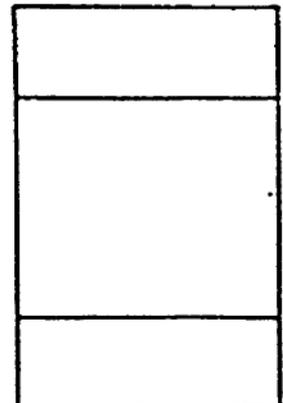
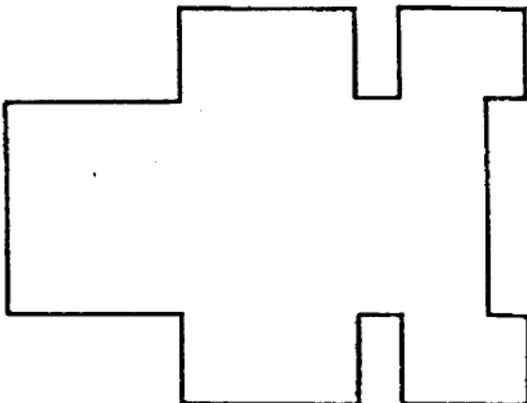
1



2

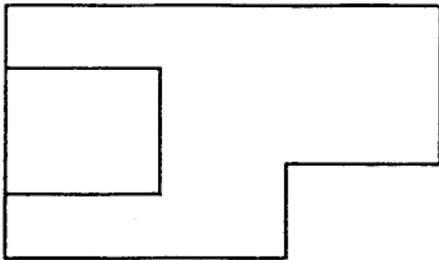
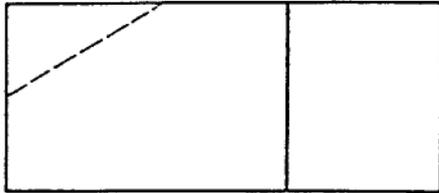


3

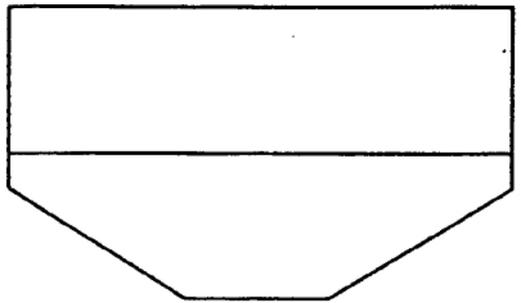
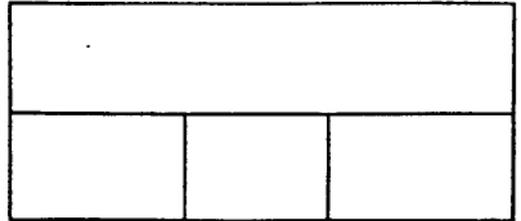


Gambarkan perspektif Kavalirnya.

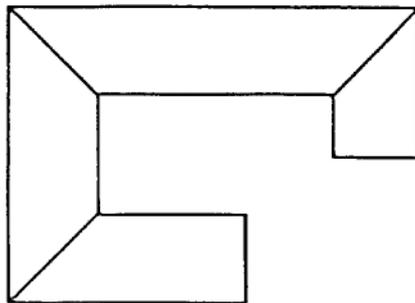
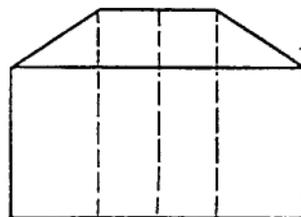
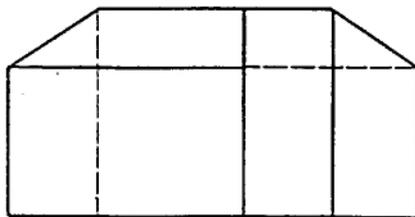
4



5

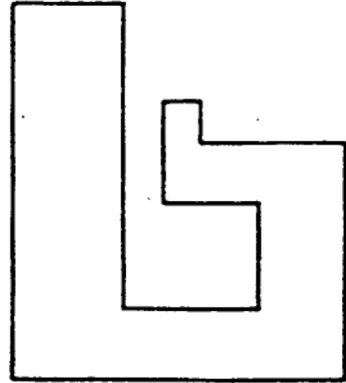
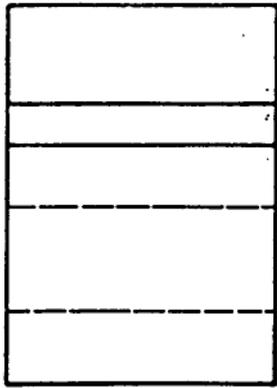


6

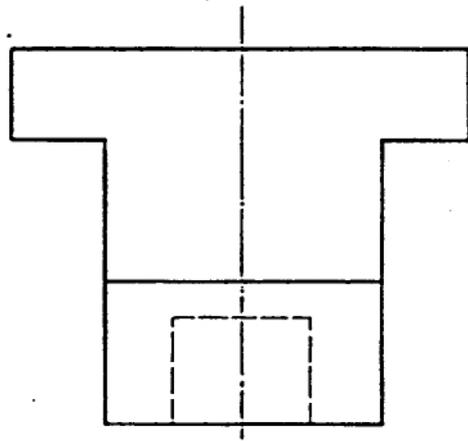
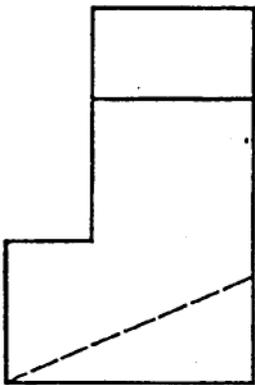


Gambarkan perspektif Diametriknya.

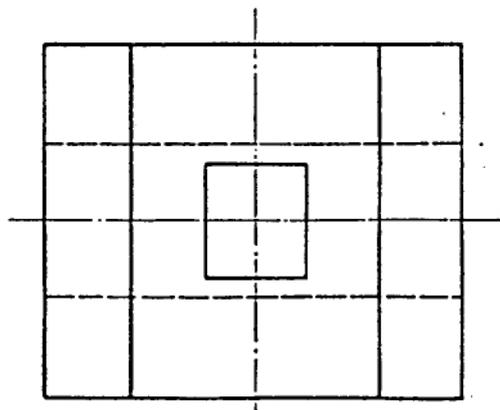
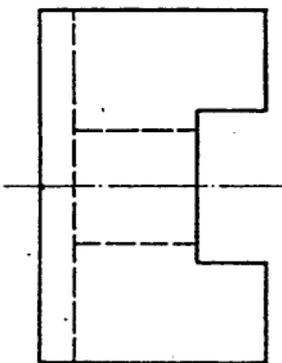
7



8



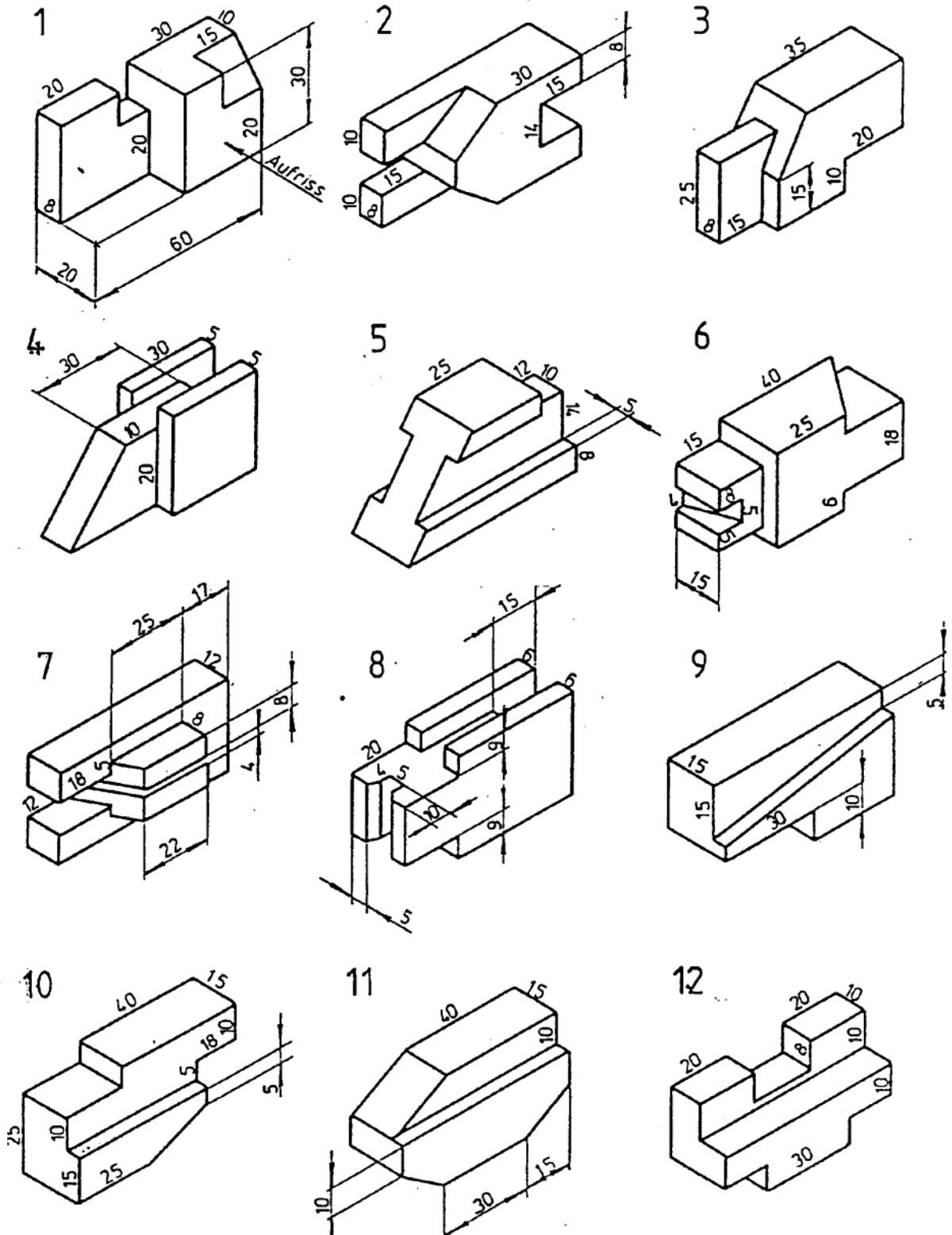
9



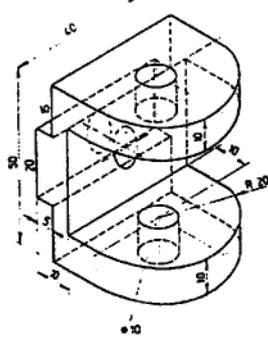
Gambarkan ketiga pandangan proyeksi (pandangan depan, atas dan samping) dari gambar perspektif di bawah ini.

Ukuran dasar dari balok adalah : 60 x 20 x 30 mm.

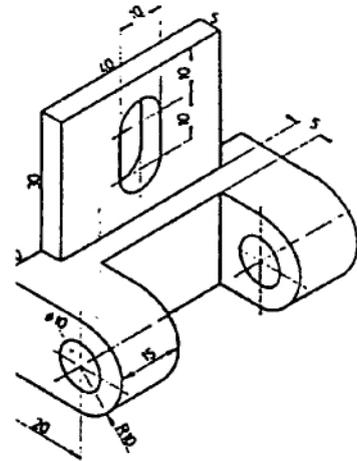
Ukuran-ukuran tidak perlu dicantumkan.



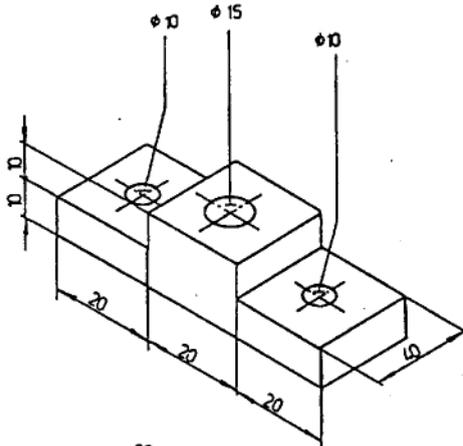
13



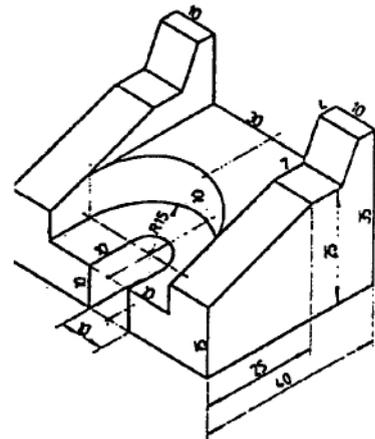
14



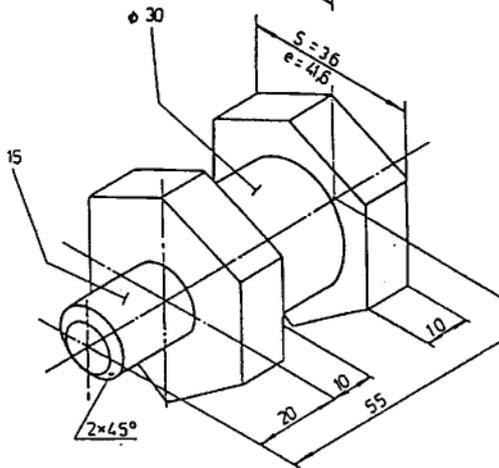
15



16



17



18

