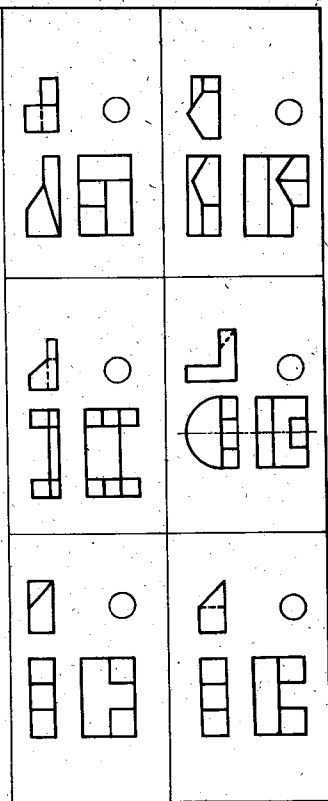
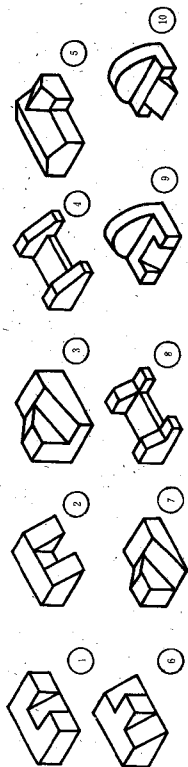


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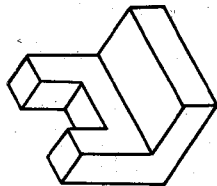
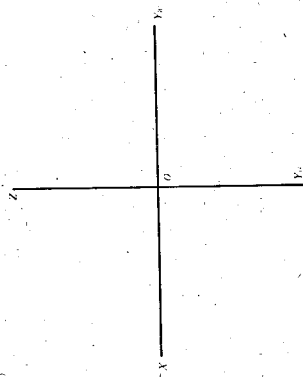
一、投影的基本知识

1-1 根据立体图找对应的三面投影图

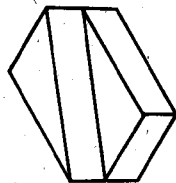
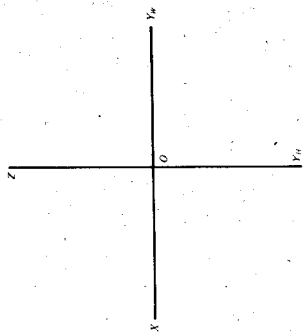


1-2 根据立体图画出三面投影图

(1)

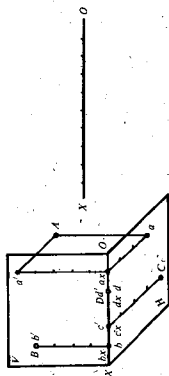


(2)

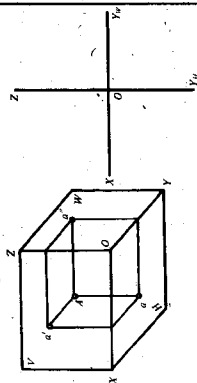


二、点、直线、平面的投影

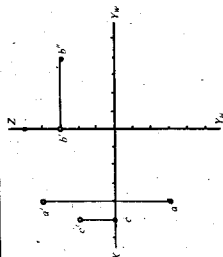
2-1 根据 A 、 B 、 C 、 D 各点的立体图，作出两面投影图。



2-2 根据 A 点的立体图，作出三面投影图

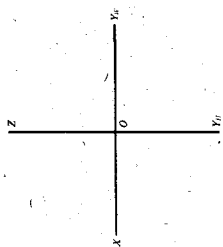


2-3 根据各点的两面投影补第三投影，指出各点到投影面的距离



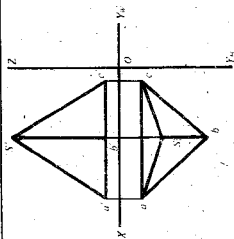
点 名	距 V 面	距 H 面	距 W 面
A			
B			
C			
D			

2-4 已知 A 、 B 、 C 各点的坐标值，求作三面投影图



坐 标 点 名	X	Y	Z
A	10	15	20
B	15	15	10
C	20	20	20

2-5 判別下列投影图中S、A、B、C四点的相对位置填入表中



A点位于S点的

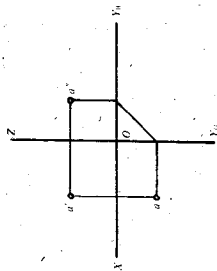
A点位于C点的

B点位于S点的

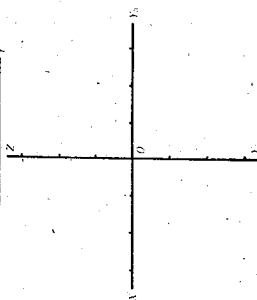
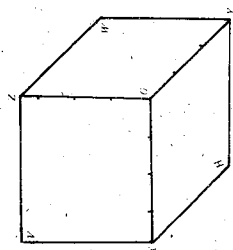
C点位于S点的

B点位于A点的

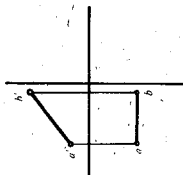
2-6 已知点A的投影,求点B、C、D的投影,使B在A的正前方5, C在A点的正下方5, D点在A点的正前方10



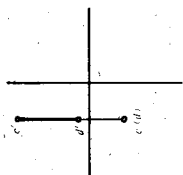
2-7 已知线段两端点的坐标A(30, 20, 0)、B(10, 0, 30) 作出该线段的直观图和三面投影图



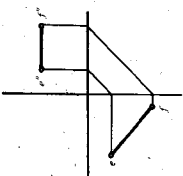
2-8 已知直线的两面投影, 补出第三投影, 判明是何种位置直线。



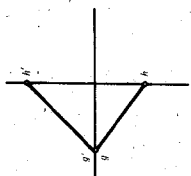
____ 线



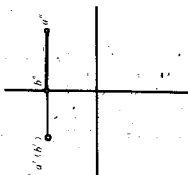
____ 线



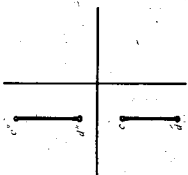
____ 线



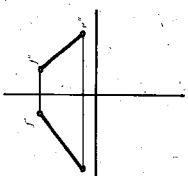
____ 线



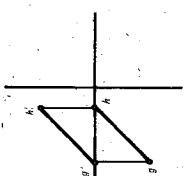
____ 线



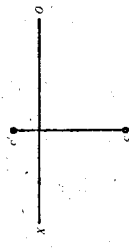
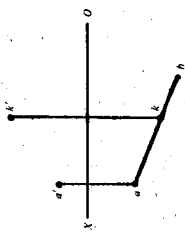
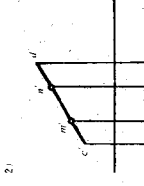
____ 线

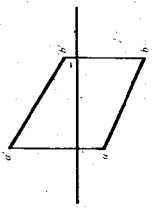
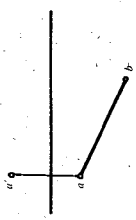
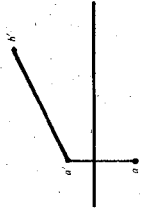
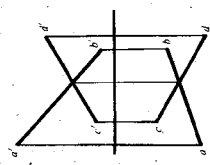
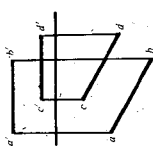
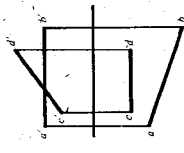
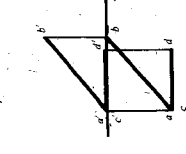
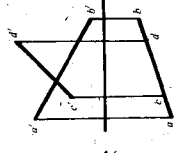


____ 线

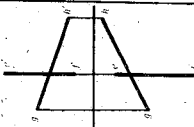
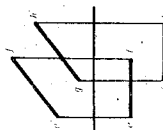
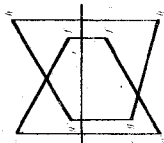
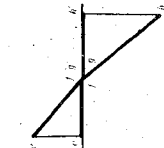
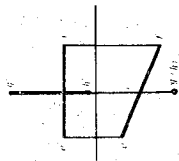


____ 线

2-9 试过点A作一正平线AB、长40mm $\alpha = 30^\circ$		2-10 已知正垂线CD端点C的投影, CD长25mm, 求CD的投影		2-11 已知点K在AB上, 求k'	
2-12 判断下列各点是否在直线上					
1)  M点 _____ AB上 N点 _____ AB上		2)  M点 _____ CD上 N点 _____ CD上		3)  M点 _____ EF上 N点 _____ EF上	

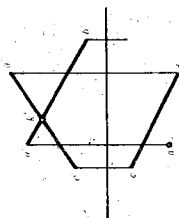
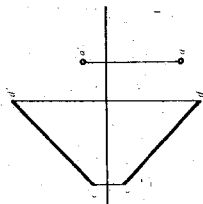
2-13 求线段 AB 的实长及对其投影面的倾角 α 、 β		2-14 已知 $AB = 40\text{mm}$, 求 b'		2-15 已知 AB 对 V 面的倾角 $\beta = 30^\circ$, 求 b	
2-16 判别下列二直线的相对位置					
     $AB \parallel CD$ _____ _____ _____ _____					

2-17 判断下列二直线的相对位置

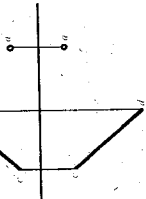
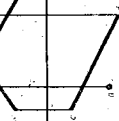
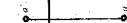


1.1 3.1 4.1

2-18 试过点 F 作一正平线与 CD 相交

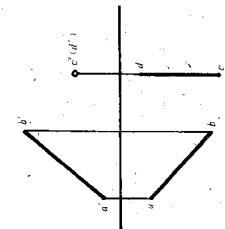


2-20 过点 A 作直线与 CD 相交,使交点距 N 面为20

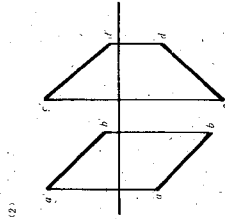


2-21 试作一水平线与AB、CD相交

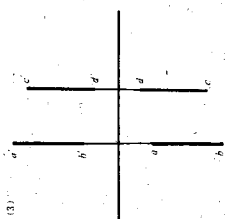
(1)



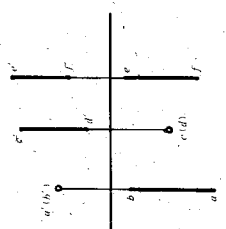
(2)



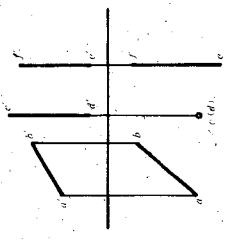
(3)



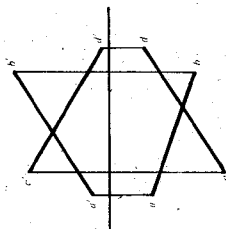
2-22 作直线MN使它
与AB、CD、EF均
相交



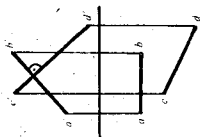
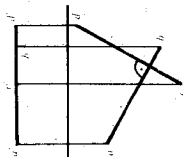
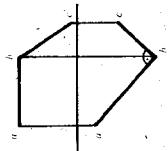
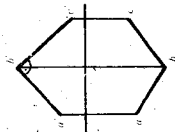
2-23 作直线MN使它
与AB平行与CD、
EF相交



2-24 判别交错直线AB、CD
重影点的可
见性

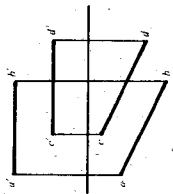
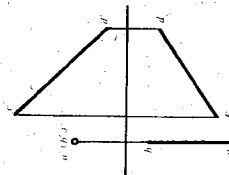
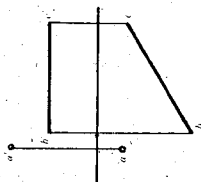
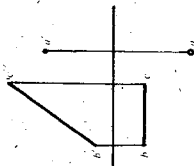


2-25 判断二直线是否垂直



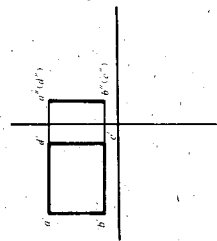
二直线

2-26 过点A作直线与BC垂直相交，并求距离

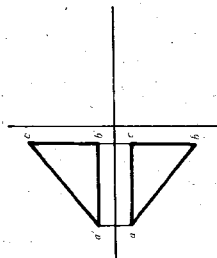


2-27 求直线AB与CD的真实距离

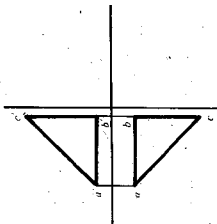
2-28 补出平面的第三投影。判别是何种位置平面



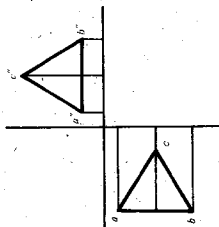
面 _____



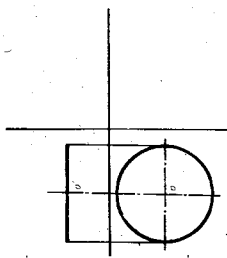
面 _____



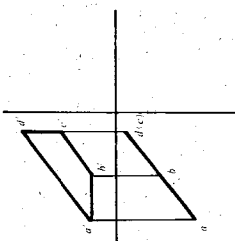
面 _____



面 _____



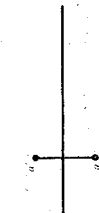
面 _____



面 _____

2-29 根据要求作平面

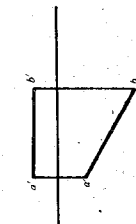
(1) 过点A作正垂面 ($\alpha = 30^\circ$)



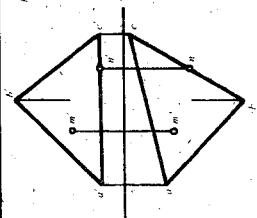
(2) 过点A作一平行于H面的正方形边长为20mm



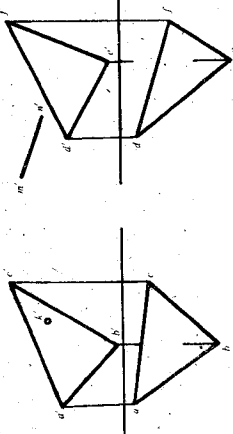
(3) 以AB为一边作一般位置平面



2-30 判定点M、N是否在平面ABC上

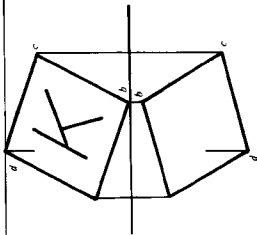
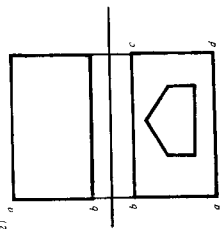
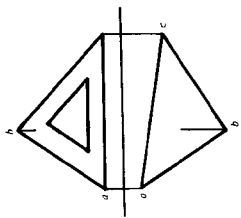


2-31 已知K在 $\triangle ABC$ 上, MN在 $\triangle DEF$ 上, 求点K和MN的水平投影

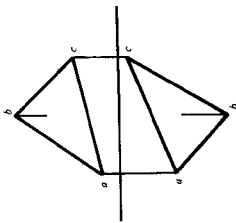


2-32 已知平面内图形的一个投影, 求另一个投影

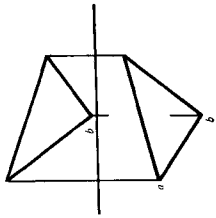
2)



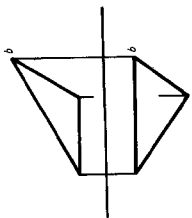
2-33 在平面内任作一条正平线和一条水平线



2-34 在 $\triangle ABC$ 内作距 H 面20的水平线

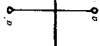


2-35 在 $\triangle ABC$ 上作一直线 EF 使 $EF \parallel AB$

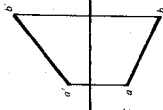


2-36 根据已知条件作特殊位置平面 (用迹线表示)

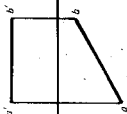
(1) 过点 A 作铅垂面



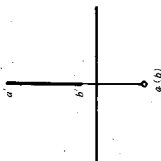
(2) 过直线 AB 作正垂面



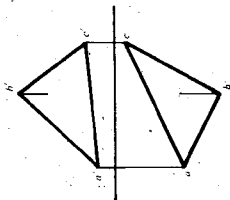
(3) 过直线 AB 作水平面



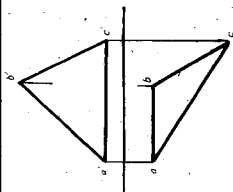
(4) 过直线 AB 作正平面



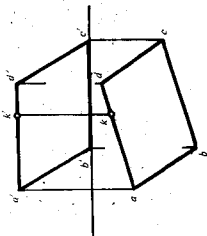
2-37 求 $\triangle ABC$ 对 H 面的最大斜度线及 α 角



2-38 求 $\triangle ABC$ 对 V 面的最大斜度线及 β 角

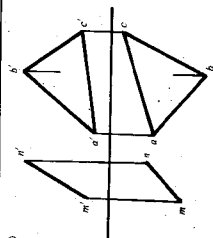


2-39 求小球从 K 点沿斜坡滚下的轨迹的投影, 并求斜坡倾角 α

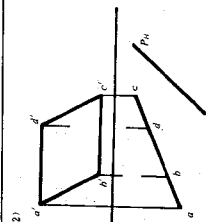


三、直线与平面、平面与平面的相对位置

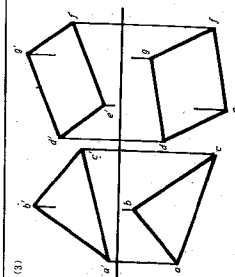
3-1 判别直线与平面、平面与平面是否平行



$MN \parallel \triangle ABC$

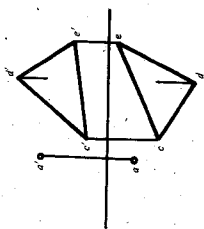


平面 P 与 $\square ABCD$

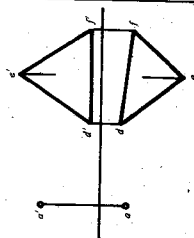


$\triangle ABC$ 与 $\square DEFG$

3-2 过点 A 作一水平线平行于 $\triangle CDE$



3-3 过点 A 作一平面平行于 $\triangle DEF$



3-4 过点 K 作一直线同时平行于平面 P 与 $\triangle ABC$

