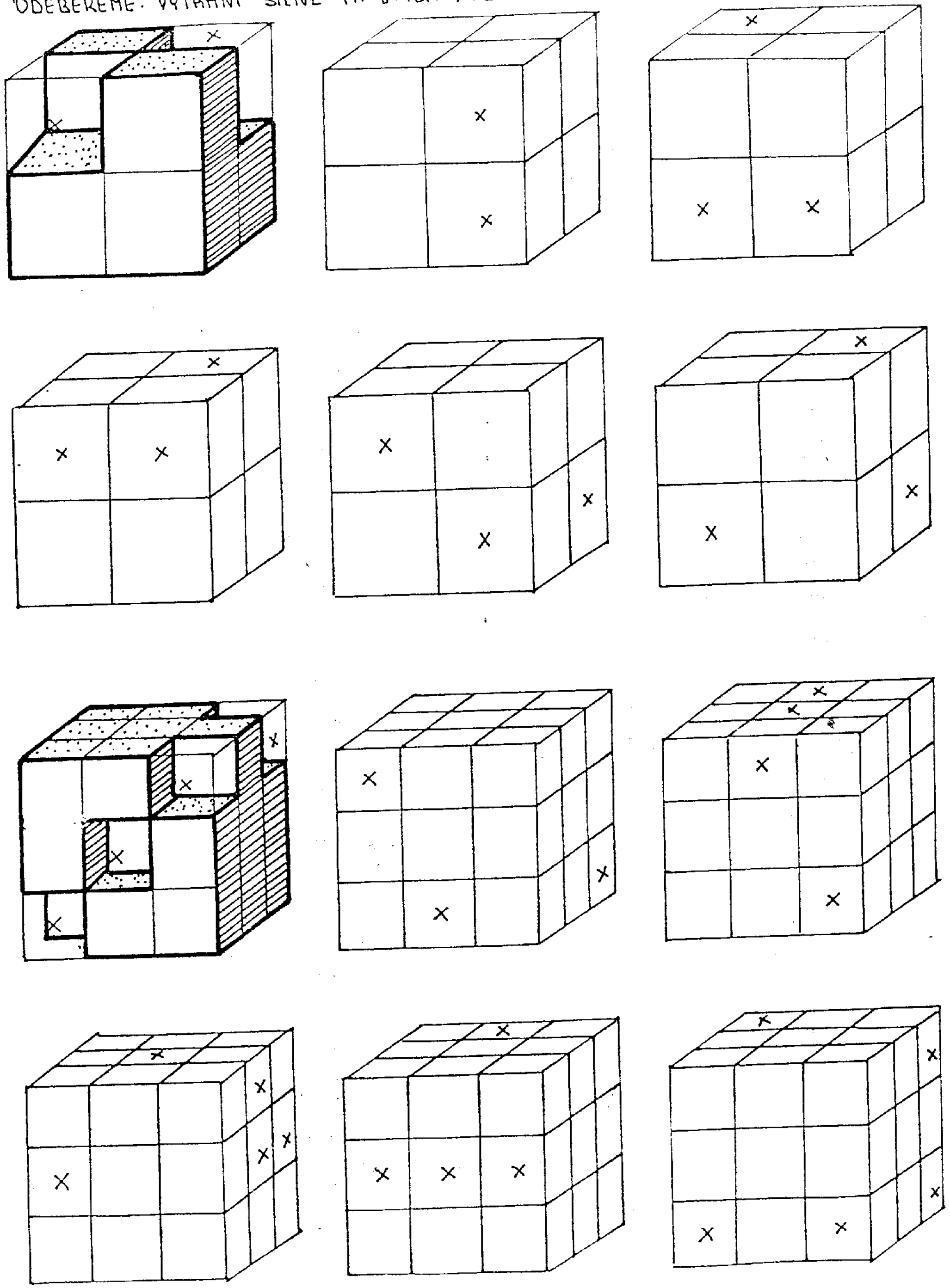
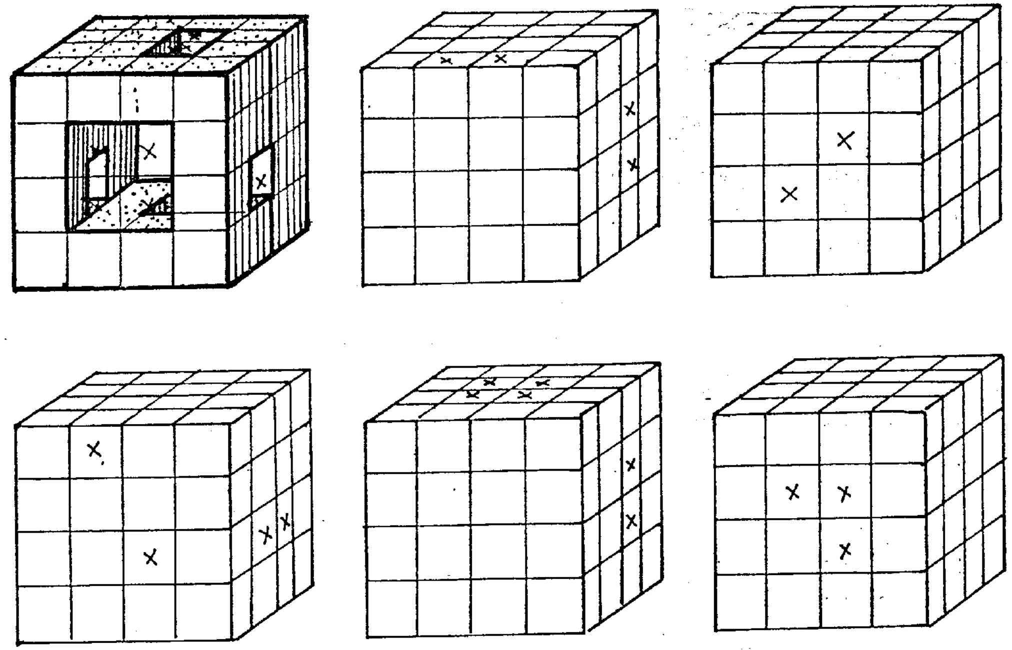
MÁME ZDE KRYCHLE SLOŽENÉ Z MENŠÍCH KRYCHLIČEK. KRYCHLIČKY OZNAČENÉ × ODEBEREME. VYTÁHNI SILNĚ (A DOPLŇ!), CO Z KRYCHLÍ ZBUDE!

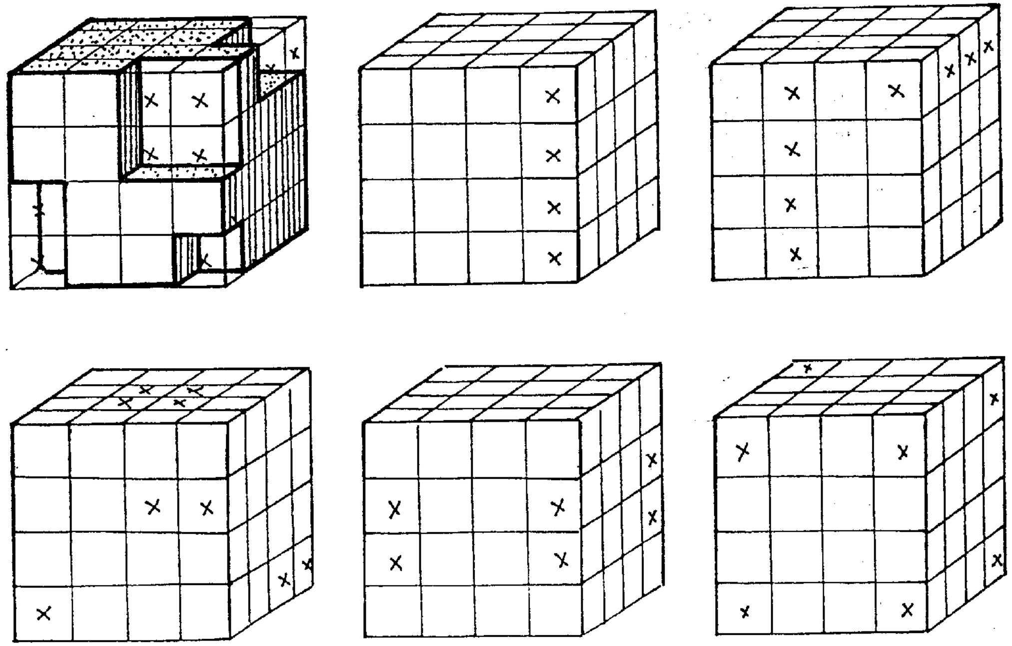


URČI POVRCH A OBJEM TĚCHTO TĚLES!

KRYCHLE SLOŽENÉ Z MALÝCH KRYCHLIČEK JSOU „PROVRTANÉ" VŽDY SKRZ NASKRZ (×) VYTÁHNĚTE SILNĚ, CO ZBUDE. VÍTE, KOLIK KRYCHLIČEK BYLO ODSTRANĚNO?



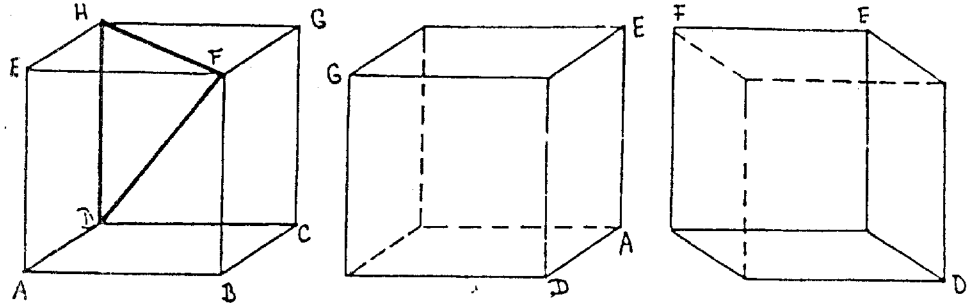
Z DALŠÍCH KRYCHLÍ JSOU ODSTRANĚNY POUZE MALÉ KRYCHLIČKY OZNAČENÉ X. VYTÁHNĚTE SILNĚ TĚLESA, KTERÁ PO ODSTRANĚNÍ KRYCHLIČEK ZBUDOU. VYBARVĚTE!

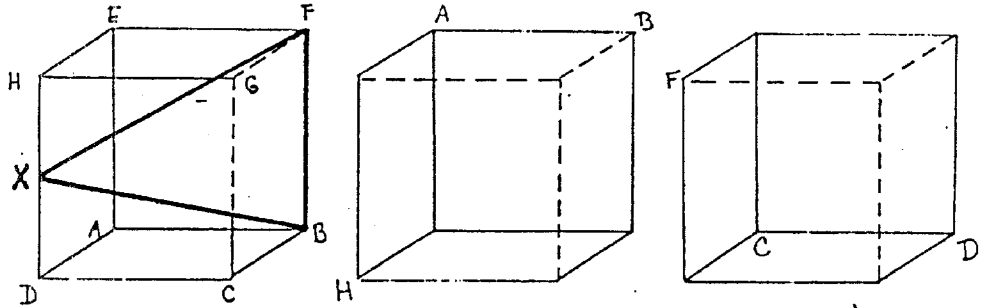


UMĚLI BYSTE URČIT POVRCH TĚCHTO TĚLES?

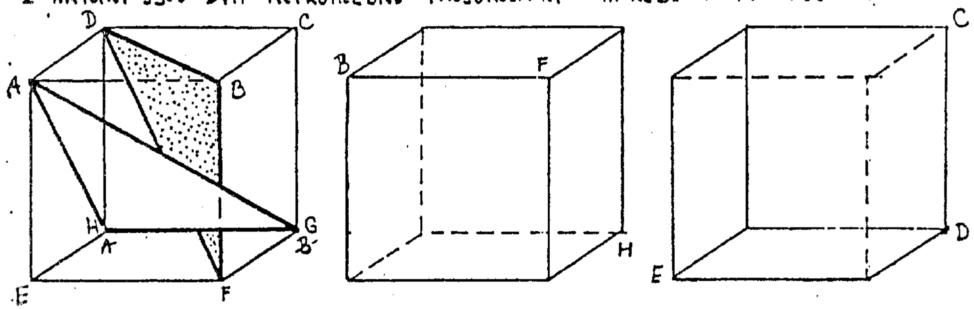
C-J

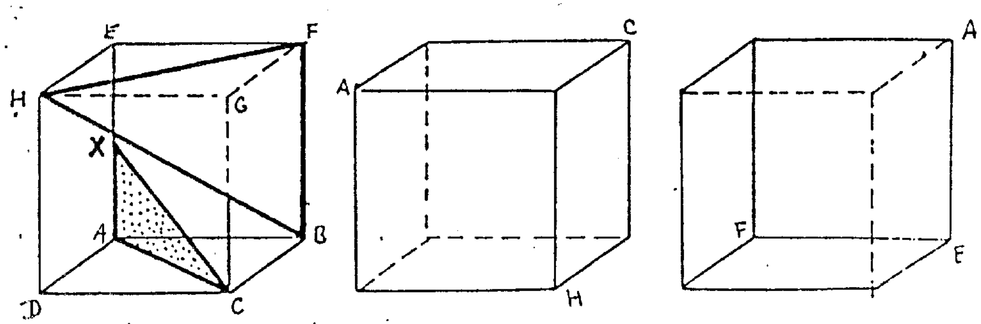
DO DRÁTĚNÉ KRYCHLE ABCD EFGH JE UMÍSTĚN NEPRŮHLEDNÝ TROJÚHELNÍK
ZAKRESLI KRYCHLI S TROJÚHELNÍKEM I V POOTOČENÍ (NEJDŘÍV DOPLŇ VRCHOLY!)





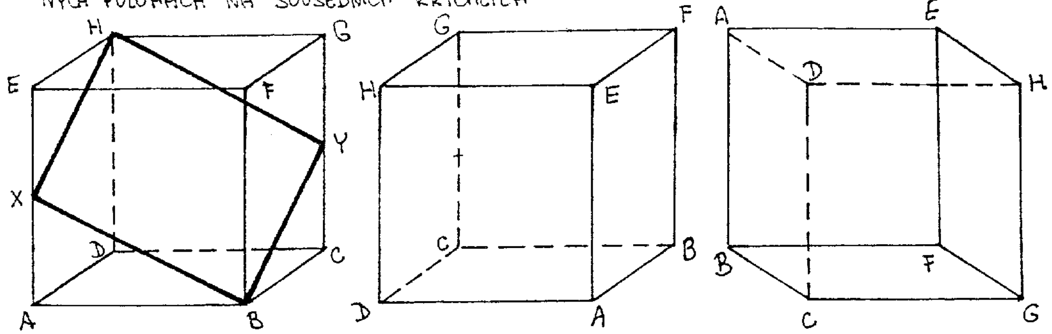
V KRYCHLI JSOU DVA NEPRŮHLEDNÉ TROJÚHELNÍKY. ZAKRESLI V POOTOČENÍ!

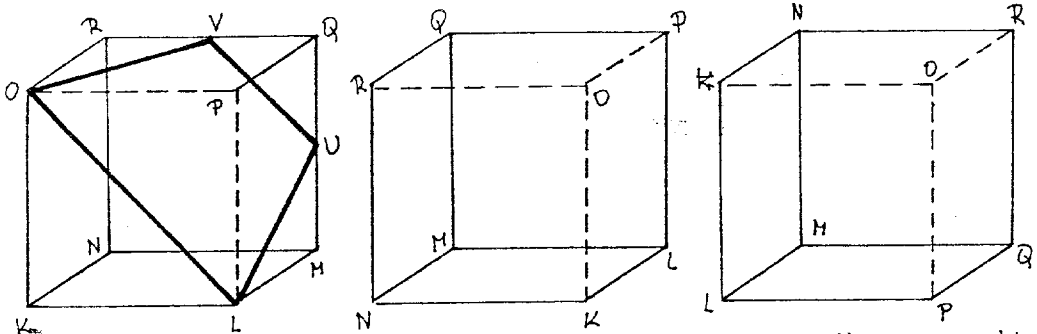




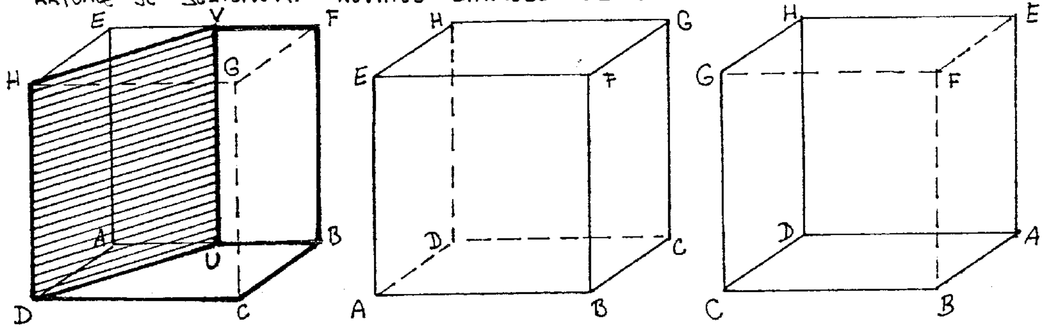
URČI, KTERÉ STRANY TROJÚHELNÍKŮ ΔACX, ΔBFH NEBO ΔAHG A ΔBDF JSOU RŮZNOBĚŽNÉ, ROVNOBĚŽNÉ NEBO MIMOBĚŽNÉ!

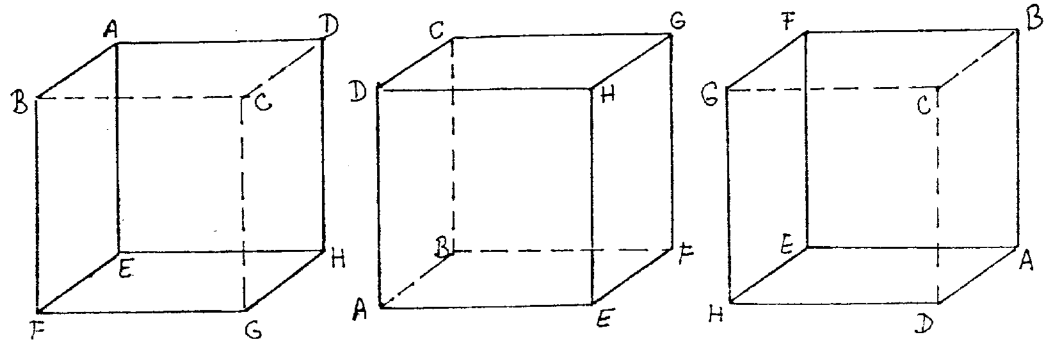
V DRÁTĚNÉ KRYCHLI JE UMÍSTĚN NEPRŮHLEDNÝ ČTYŘÚHELNÍK. ZAKRESLI HO V POOTOČENÝCH POLOHÁCH NA SOUSEDNÍCH KRYCHLÍCH.





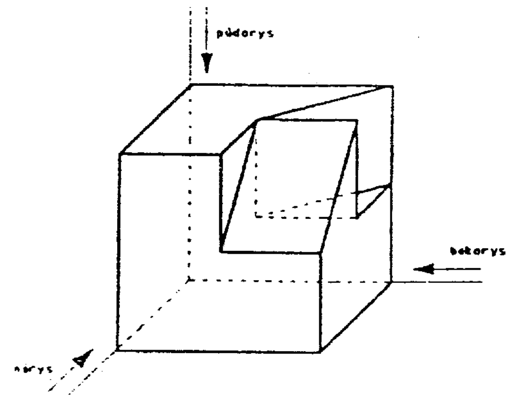
KRYCHLE JE SEŘÍZNUTA ROVINOU. ZAKRESLI ZBYTEK KRYCHLE SILNĚ - V POOTOČENÍ!





Příklad

K danému tělesu sestrojte jednotlivé pohledy.



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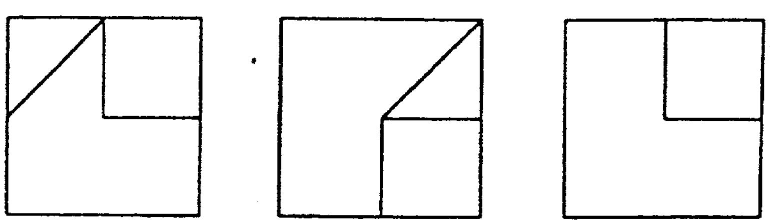

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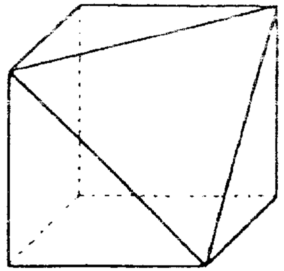

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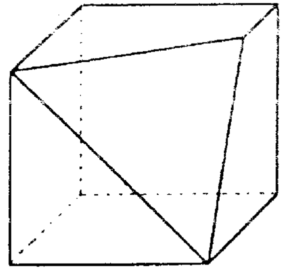

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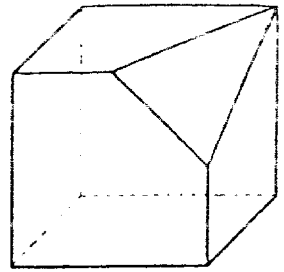

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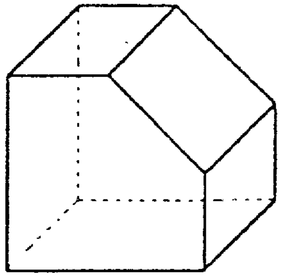

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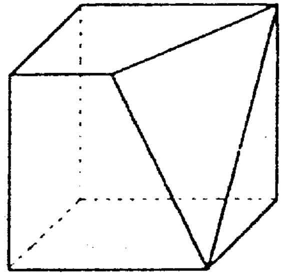

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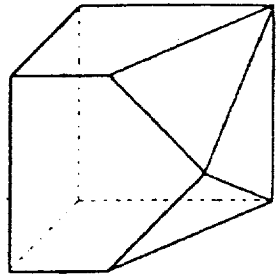

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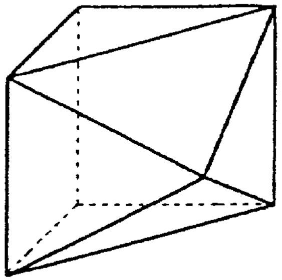

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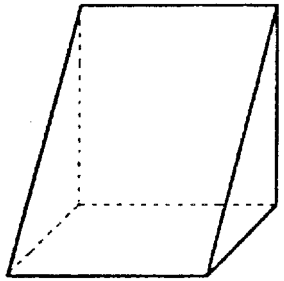

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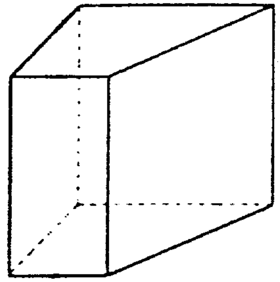

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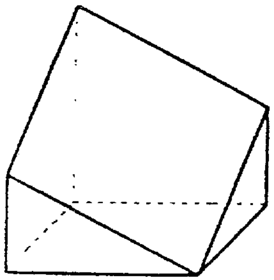

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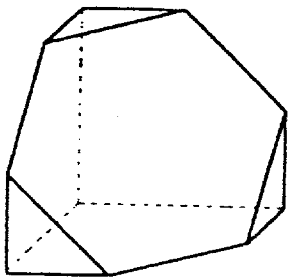

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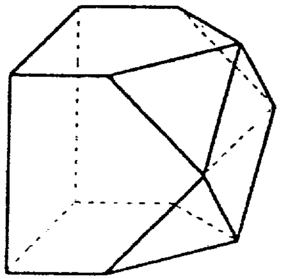

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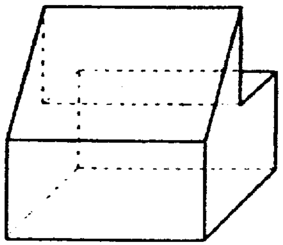

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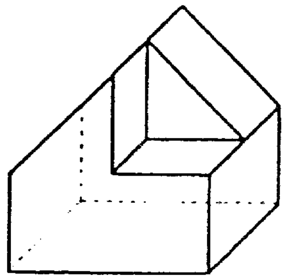

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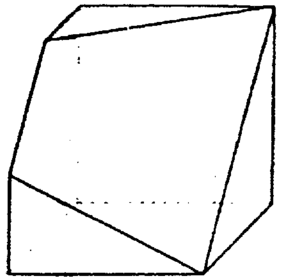

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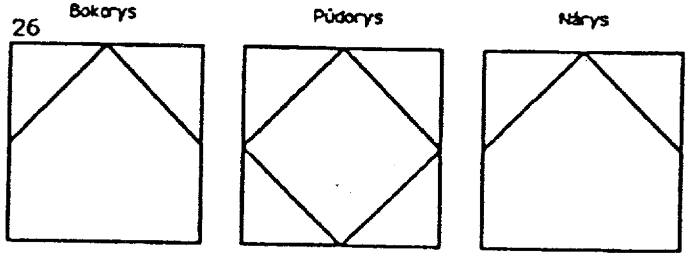

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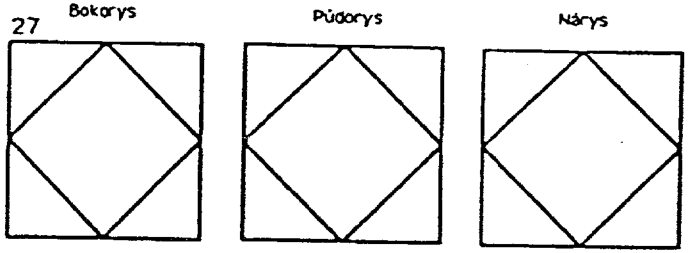

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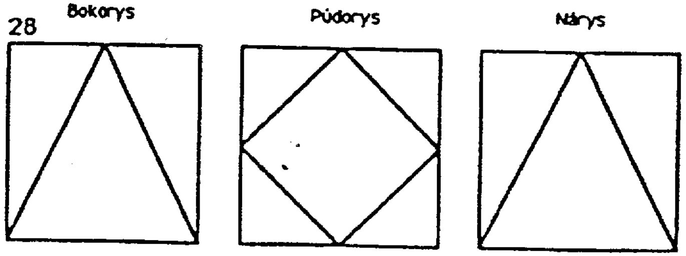

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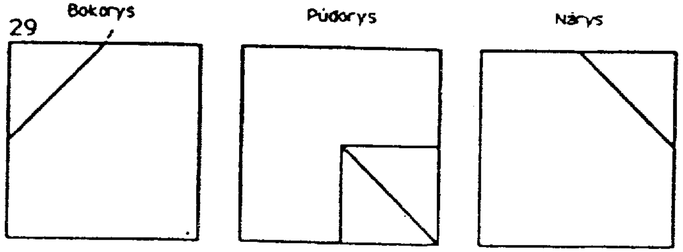

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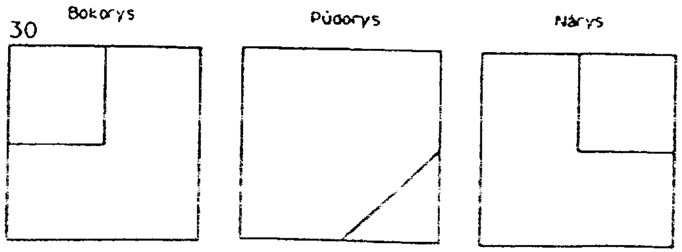

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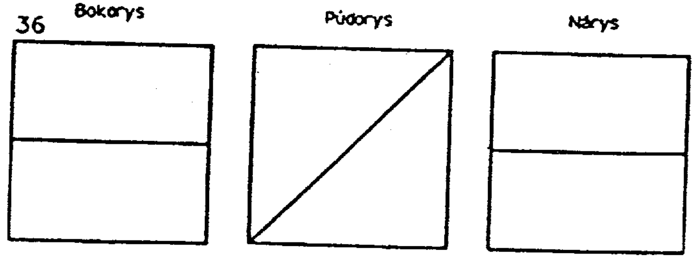

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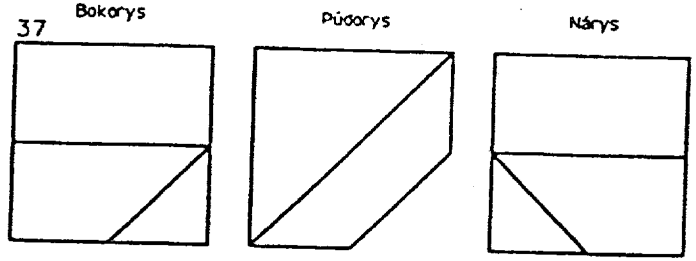

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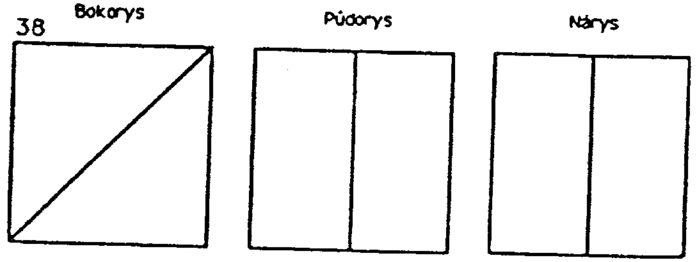

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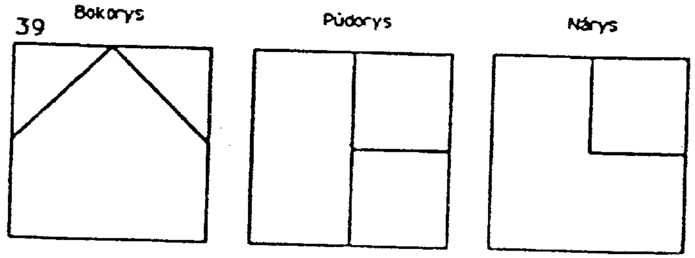

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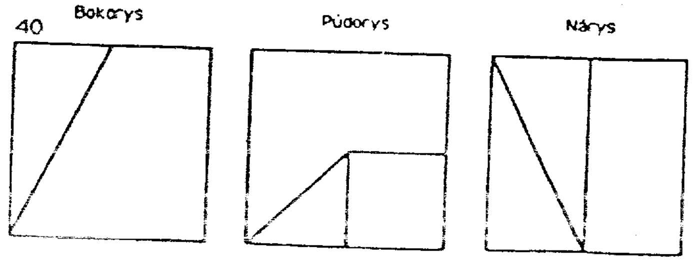
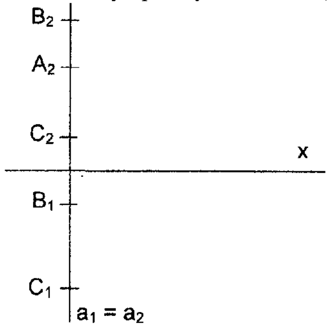
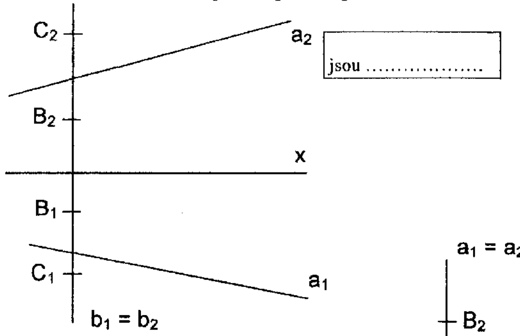


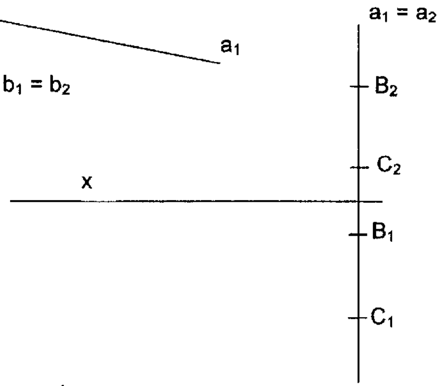
Základní úlohy Mongeova promítání ....

ZÚ 1: Sestrojte půdorys bodu $A \in a$, $a = BC$.

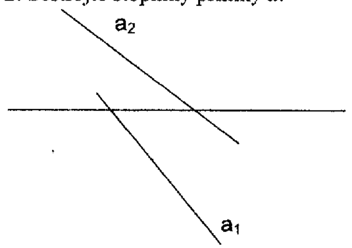


ZÚ 4: Rozhodněte o vzájemné poloze přímek a, $b = BC$.

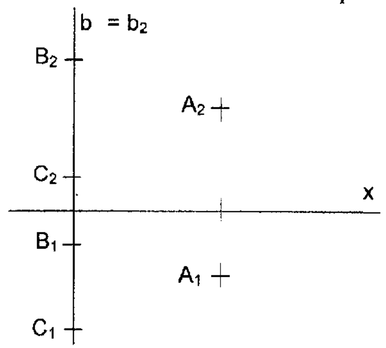




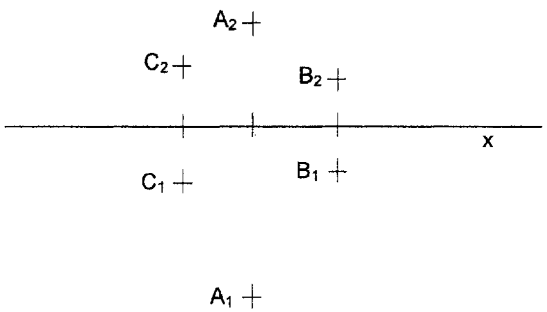
ZÚ 2: Sestrojte stopníky přímky a.



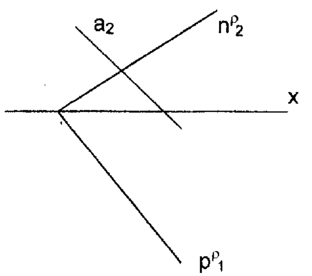
ZÚ 3: Bodem A veďte rovnoběžku a s přímkou $b = CD$.

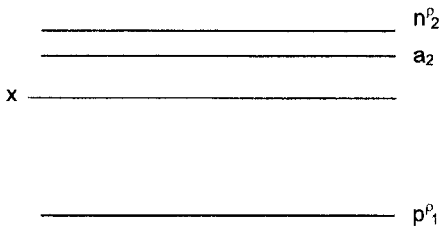


ZÚ 5: Sestrojte stopy roviny $\rho = ABC$.

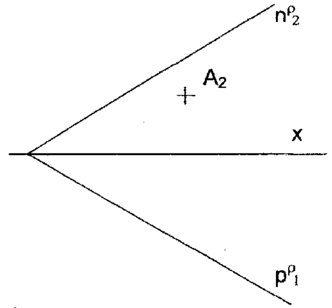


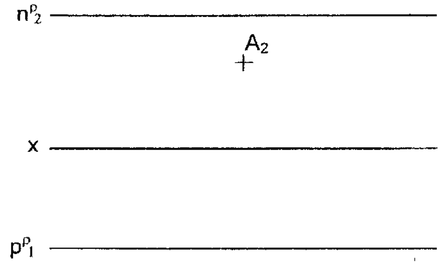
ZÚ 6: Sestrojte půdorys přímky $a \subset \rho$.



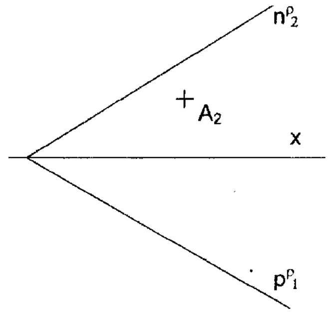


ZÚ 7: Sestrojte půdorys bodu $A \in \rho$

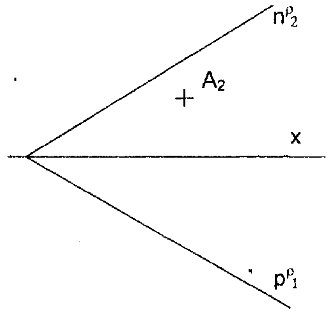




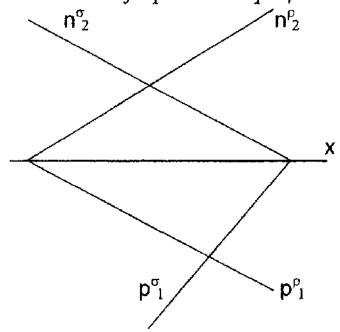
ZÚ 8: Bodem A veďte hlavní přímky obou osnov

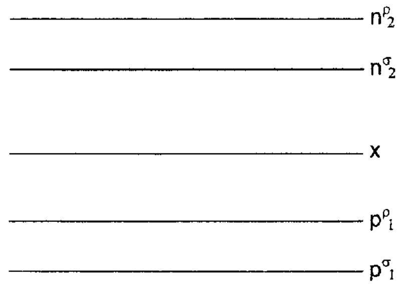


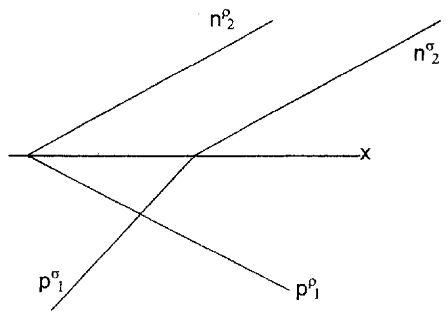
ZÚ 8: Bodem A veďte spádové přímky obou osnov

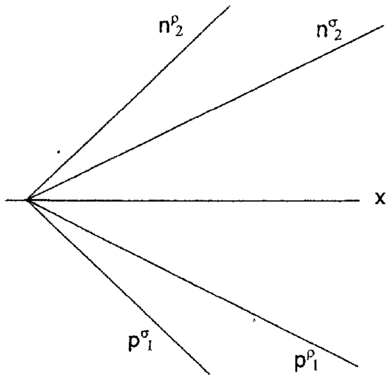


ZÚ 9: Sestrojte průsečnici $q = \rho \cap \sigma$



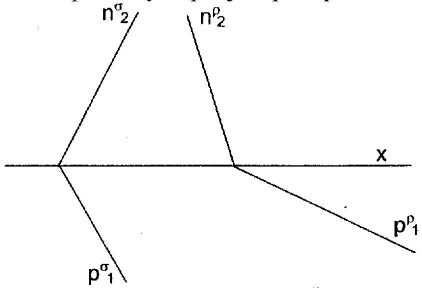




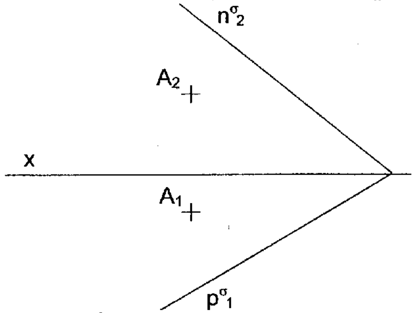


Základní úlohy Mongeova promítání 2 ....

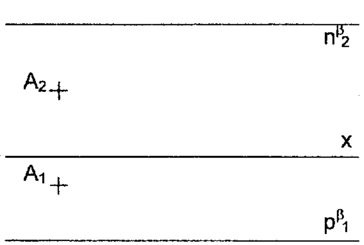
ZÚ 9: Sestrojte průsečnici $q = \rho \cap \sigma$ za předpokladu, že průsečíky stop nejsou přístupné.



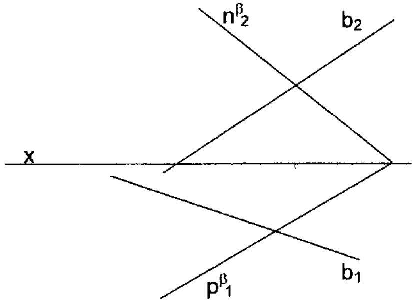
ZÚ 10: Bodem A proložte rovinu $\rho \parallel \sigma$.



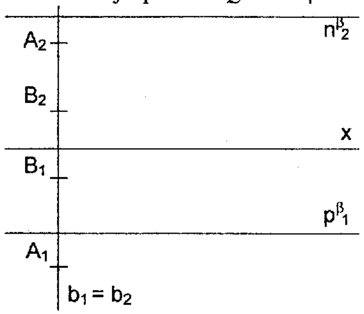
ZÚ 10: Bodem A proložte rovinu $\alpha \parallel \beta$.



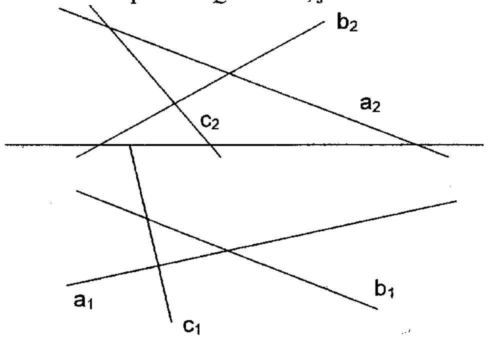
ZÚ 11: Sestrojte průsečík $Q = b \cap \beta$.



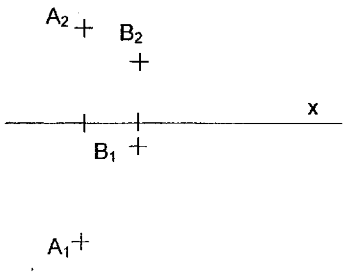
ZÚ 11: Sestrojte průsečík $Q = b \cap \beta$.



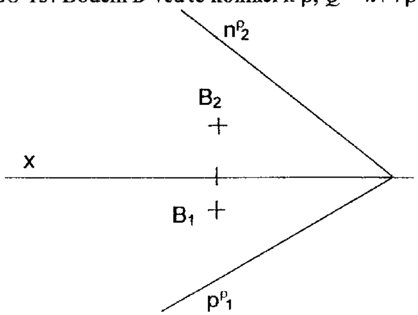
ZÚ 11: Zobrazte průsečík $Q = c \cap \alpha$, jestliže $a \subset \alpha$ a $b \subset \alpha$.



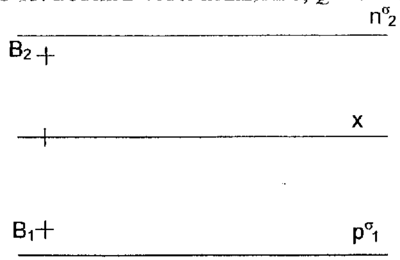
ZÚ 12: Na polopř. AB sestrojte C tak, že $|AC| = 1{,}5$.



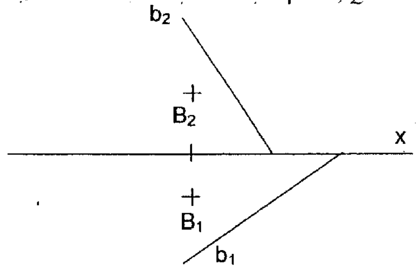
ZÚ 13: Bodem B veďte kolmici k ρ, $Q = k \cap \rho$.



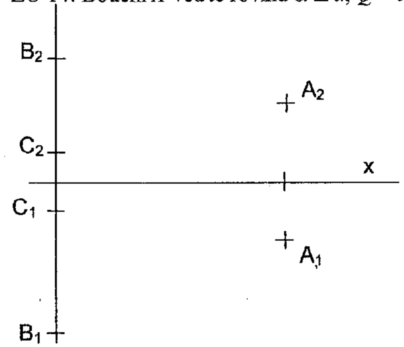
ZÚ 13: Bodem B veďte kolmici k σ, $Q = k \cap \sigma$.



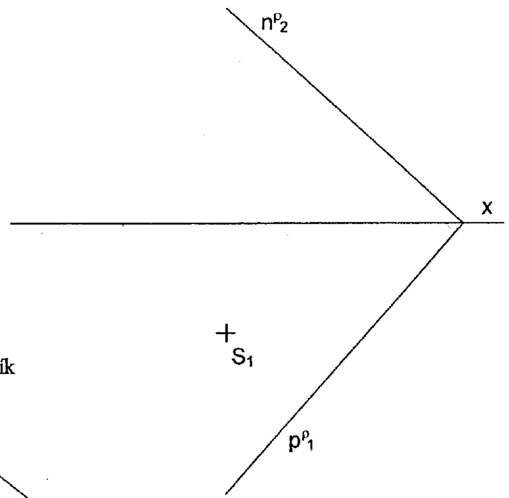
ZÚ 14: Bodem B veďte rovinu $\beta \perp b$, $Q = b \cap \beta$.



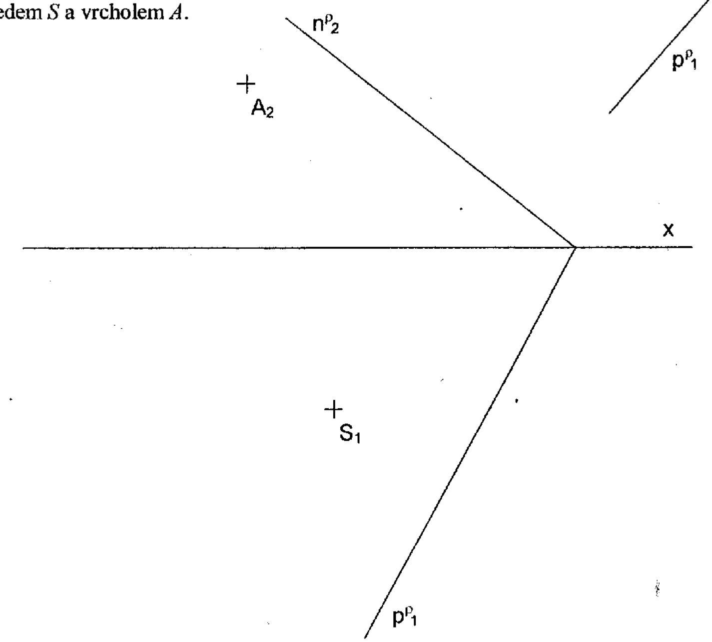
ZÚ 14: Bodem A veďte rovinu $\alpha \perp a$, $Q = a \cap \alpha$.



ZÚ 16: Zobrazte kružnici $k = (S; 2{,}2)$, $k \subset \rho$.



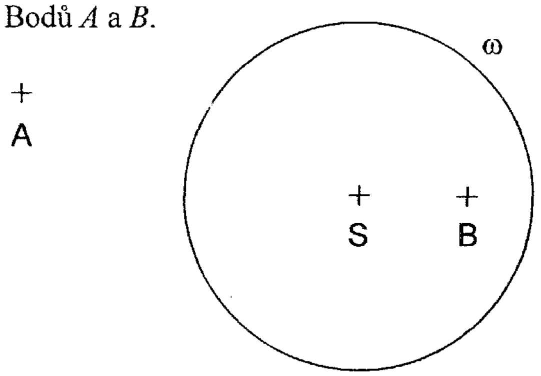
ZÚ 15: V rovině ρ zobrazte pravidelný šestiúhelník se středem S a vrcholem A.



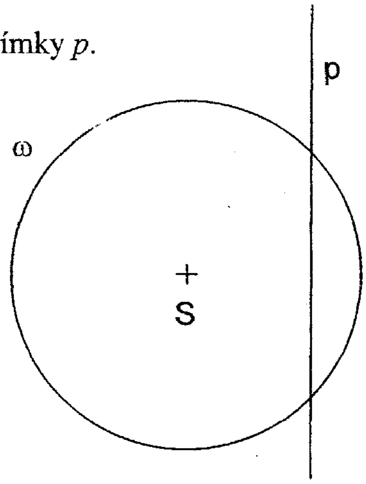
Kruhová inverze

V kruhové inverzi se středem S a řídící kružnicí ω sestrojte obrazy:

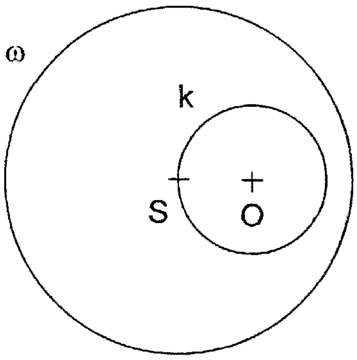
1. Bodů A a B.



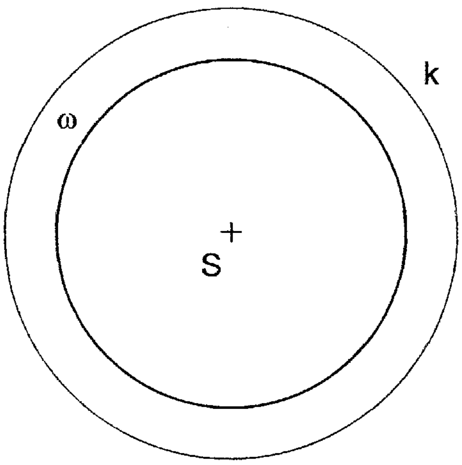
2. Přímky p.



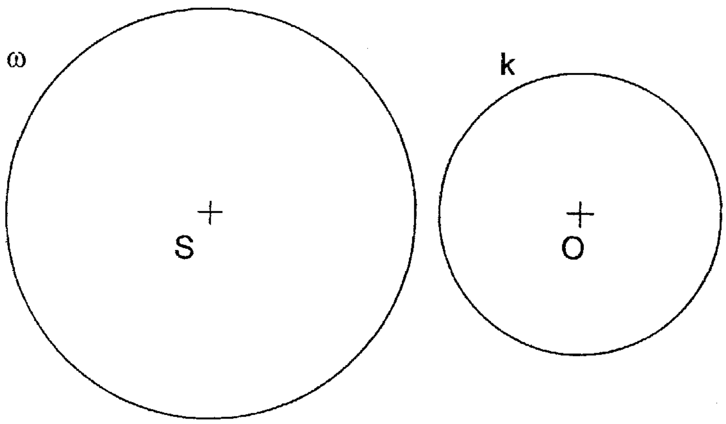
3. Kružnice k se středem O.



4. Kružnice k se středem S.



5. Kružnice k se středem O.



6. Kružnic k_1, k_2 se středy O_1, O_2, které se dotýkají ve středu inverze S.