

#7 DARS REFRAKSIYA ANOMALIYALARI.

Date: _____

REFRAKSIYA NINASI

- LINZA NINA?

- REFRAKSIYAGA MAS'UL QISMLAR

- REFRAKTIV HOLLATLAR

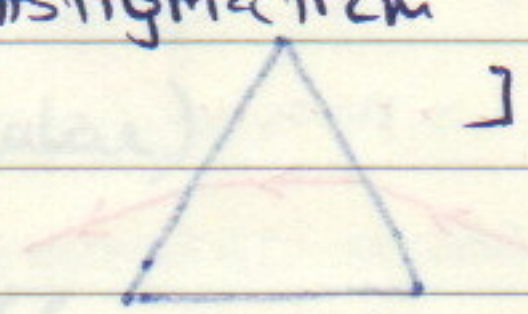
- EPIDEMIOLOGIYA

- DAVOLASH

- o Emmetropiya
- o Gipermetropiya
- o MIOPIYA

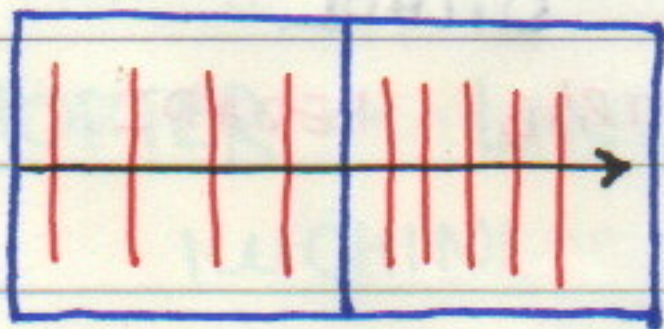
o Presbiopsiya

o Astigmatizm

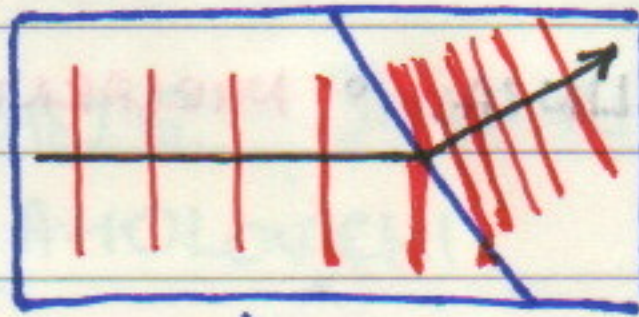


REFRAKSIYA — BIR MUHIT DAN IKKINCHI MUHITGA ÖTISH TARAYONIDA NUR / SHUVQIN SINISHI.

[Zichligi 2 xil muhit orasida nur sinishi]



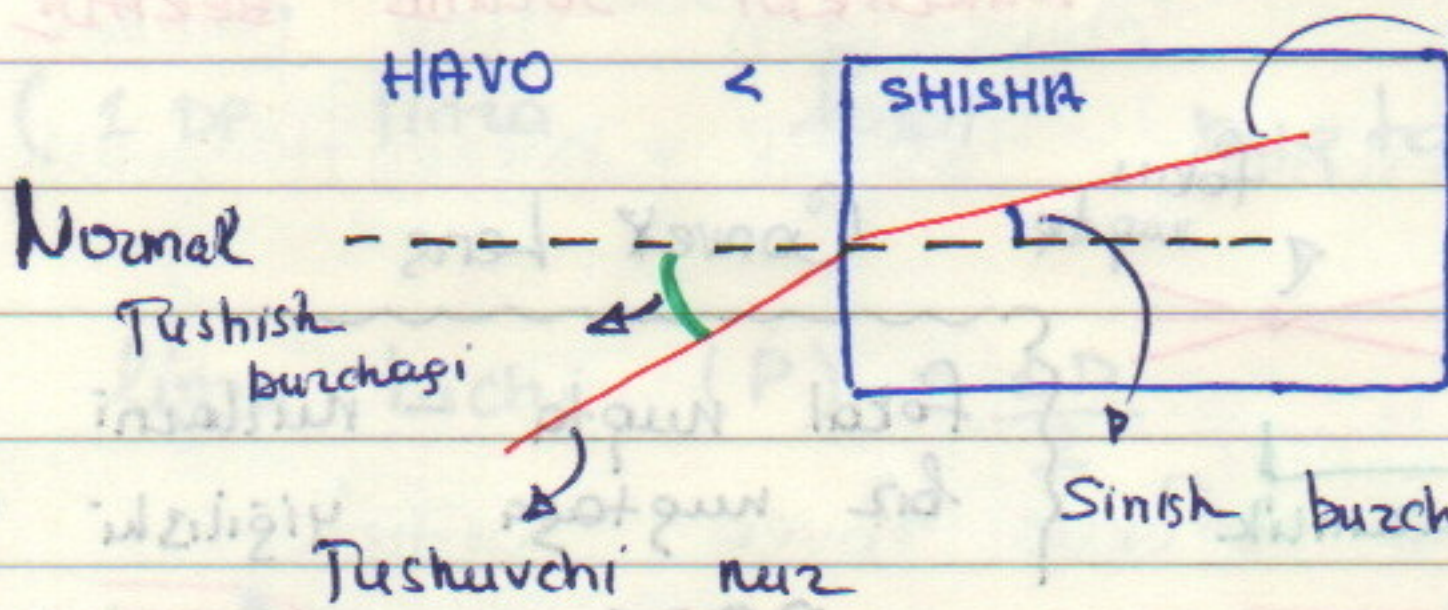
HAVO < SHISHA
ZICHLIK



QIYSHIQ BURCHAK
OSTIDA

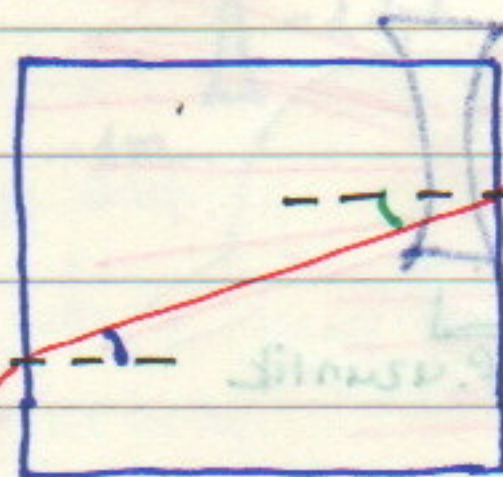


SINGAN NUR — REFRAKSIYALANGAN NUR DEVLADI



refraksiyalangan nur

havo (zichligi)



Shisha
zich

Date:

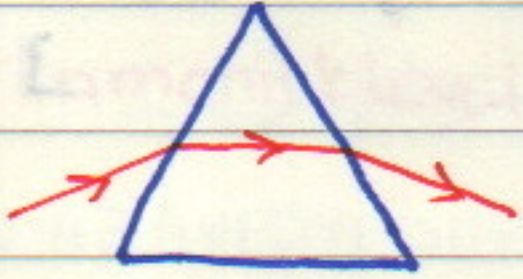
REFRAKSIYA ANOMALIYALARI

LINZA - EGRI SATHGA EGA BÖLGAN SHISHA

YOKI BOSHQA SHAFFOF MATERIALLARDAN TAYYOR.

LANGAN, NURLARNI JAMLAB YOKI SOCHIB

BERUVCHI QURILMA



PRIZMA

PRIZMAGA TUSHAYOTGAN NURLAR DOIM UNING ASOSIGA QARAB SINADI

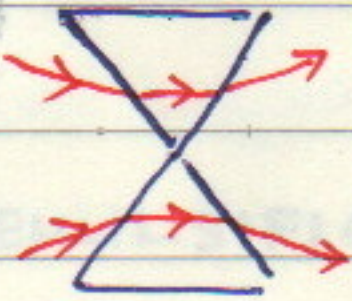


2 TA PRIZMA ^{ASOSI} → 2 TOMONLAMA QAVARIQ LINZANI MOSIL QILADI



KONVEKS LINZA

NURLARNI YIG'IB BERADI

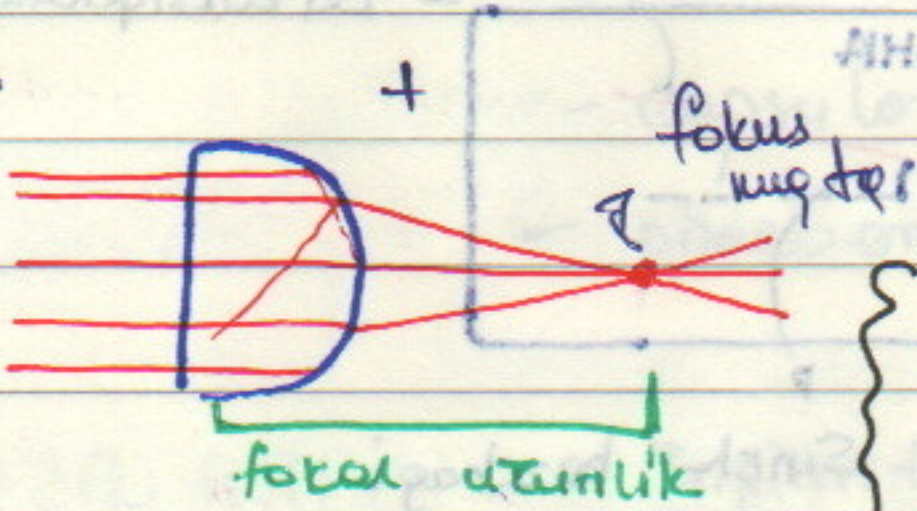


2 TA PRIZMA UCHINI BIRGA QOYSAK 2 TOMONLAMA BOTIQ LINZANI HOSIL QILADI

KONKAVO LINZA

NURLARNI SOCHIB BERADI

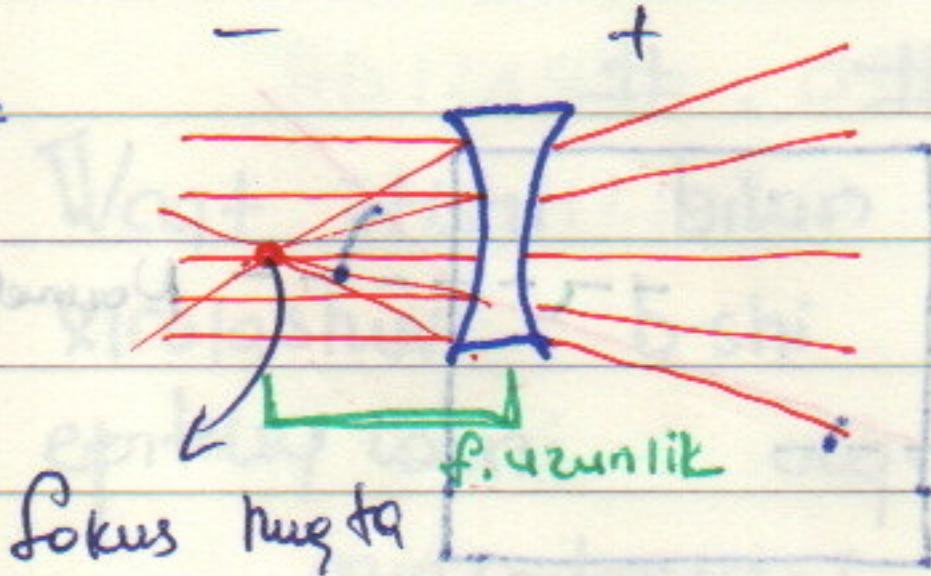
#



Convex Lens

fokal nuqta - nurlarni bir nuqtaga yig'ish

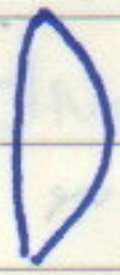
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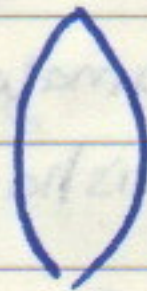
Concave Lens

fokal uzunlik - linza bilan fokus nuqtasi orasidagi masofa

◦ CONVERGING LENS (Yiguvchi linzalor)



Convex



Biconvex

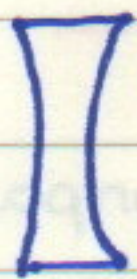


Plano-Convex

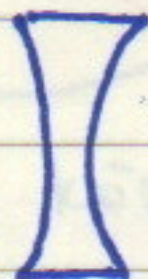


Positive meniscus

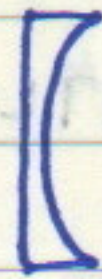
◦ DIVERGING LENS (Targatuvchi linzalor)



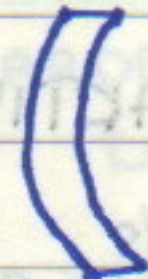
Concave



Biconcave



Plano-Concave



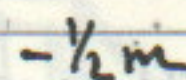
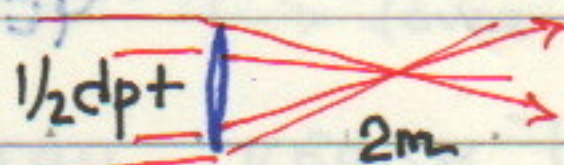
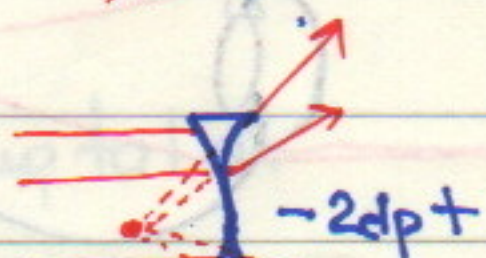
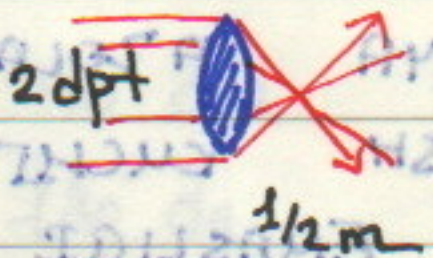
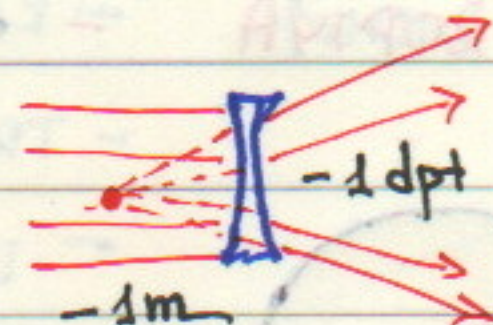
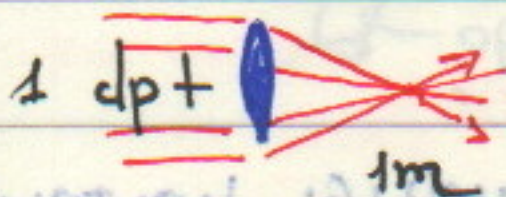
Negative meniscus

DIOPTR - LINZANING SINDIRIB BERATOLSH IYICHINI BAHOLOVCHI OLCHAM BIRLIK.

- Bizor linzaga tushuvchi parallel nurlarni fokus nuqtasi 1 metrda bolsi $= 1 \text{ DP}$

(1 DP linza focal nuqtasi 1 metrda)

$$\text{linza kuchi } (P) = \frac{1 \text{ D}}{f}$$



KÖZDAGI REFRAKSIYA

- Gauthar (20D)
- Shox Parda (40D)
- Kamalak p.
- Shishasimon tana

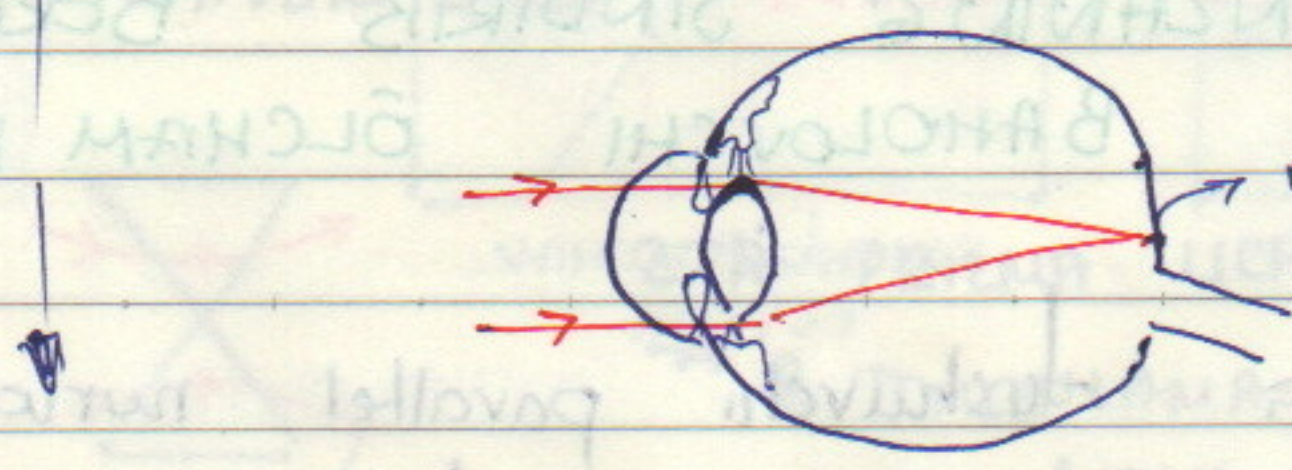
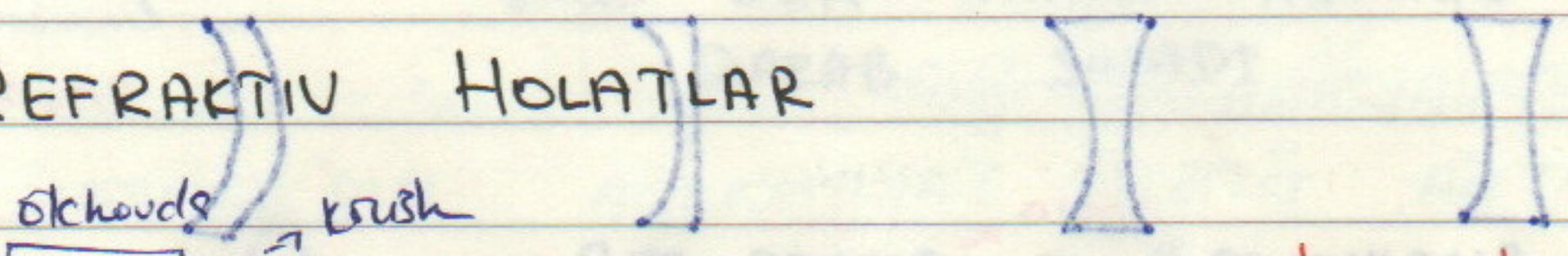
Refraktometriya → közning refraksiyasini o'lchash.



• Köz yosh hamda havo or tasilagi interfeys.
 ↳ Asosiy refraksiya un javob beradi.

REFRAKTIV HOLATLAR

• Emmetropiya → Emmetros - o'lchovda to'g'ri taq-simlangan kirish (hech qanday kamchiliklarsiz)

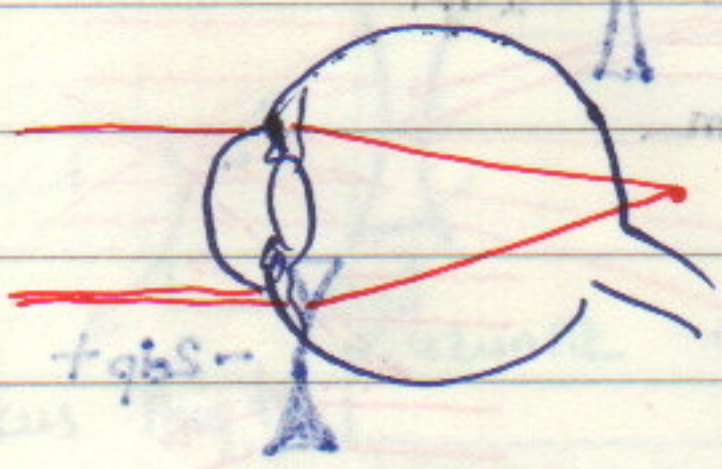


• foveadan chiqayotgan nurilarni gauthar hamda shox pardadan chiqqandan song parallel ravishda cheksizlik tomon harakatlanaolishi

• **GIPERMETROPIYA** - fokus fovea ortida

Sabablari:

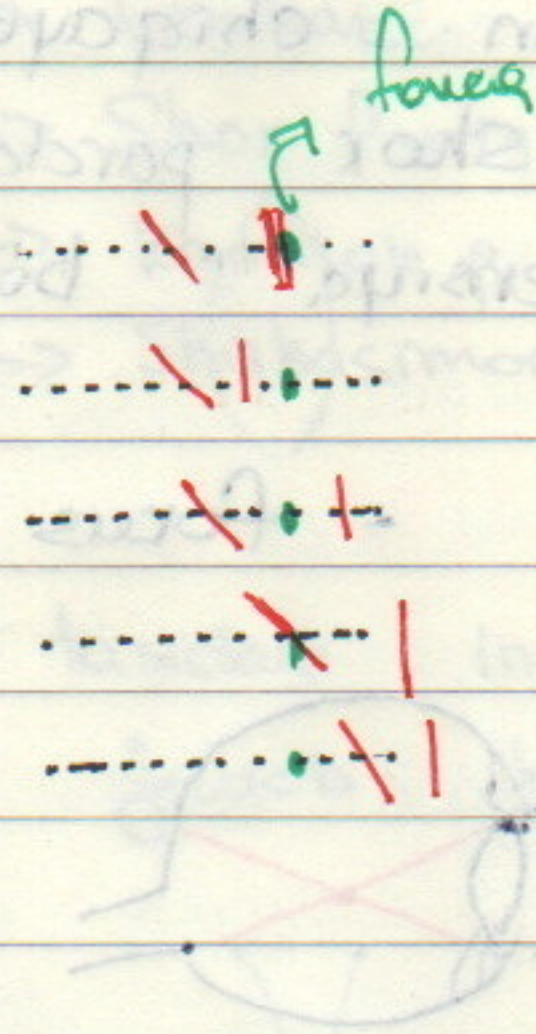
- # KÖZ ÖRI UZUNLIGI KALTALIGI
- # KÖZ REFRAKSIYA AZOLARINING SINDIRISH KUCHI YETARLI EMASLIGI



• Yaqinni yaxshi ko'rolmaslik

ASTIGMATIZM TURLARI:

- o Simple myopic
- o Compound myopic
- o Mixed
- o Simple hyperopic
- o Compound hyperopic



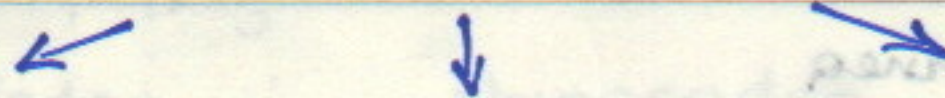
o **PRESBIOPIYA** - KÖZ GAVHARI ELASTIKLIGI KAMAYISHI HISOBIGA YAQINDAK KÖRISH

XIRALASHUVI # 45 yoshdan keyin

(Presbys - Qarilik)

focus nuqta foveadan orqada.

= MIOPIYA =



BIRLANCHI

IKKILANCHI

PSEUDOMIPIYA

- KÖZ OLMASI UZUN
- SINDIRISH KUCHI ↑

- DIABET
- KATARAKTA
- TRAVMA
- DORILAK

- NOTÖLIQ AKKOMODATSIYA

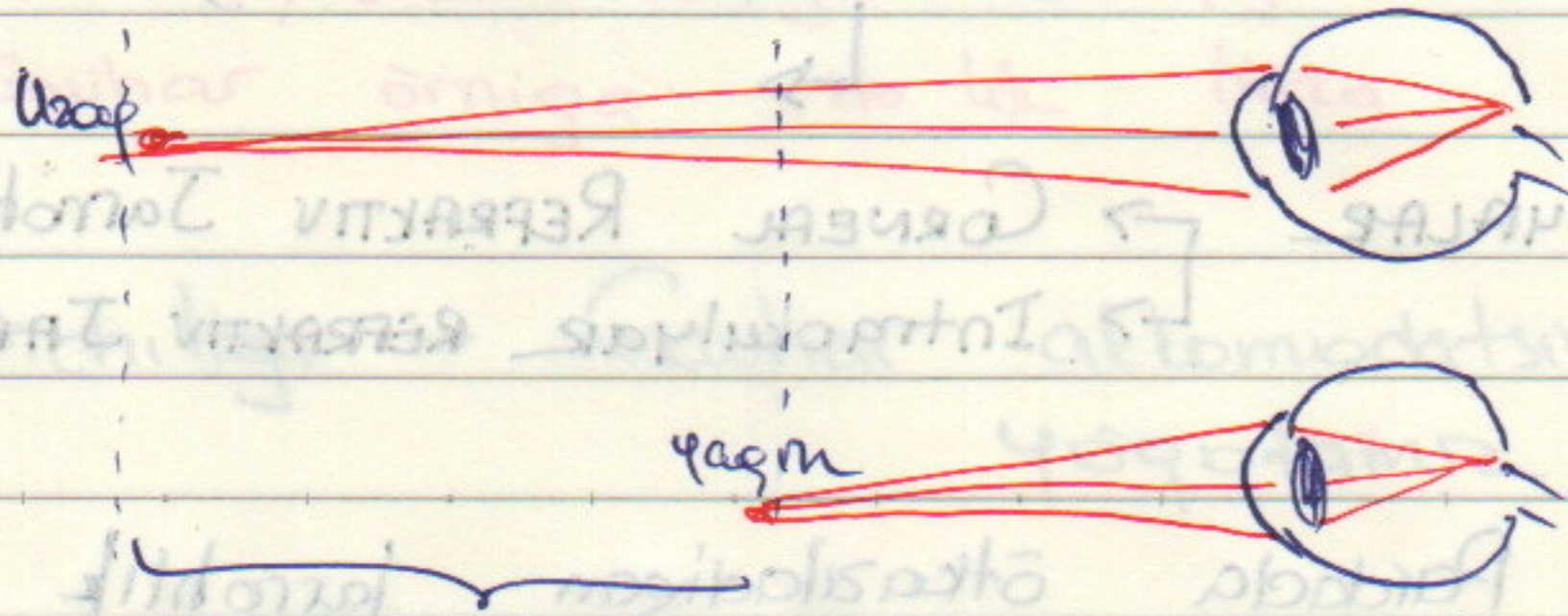
[SPAZM AKKOMODATSIYA] EMAS

- GIPERBARIK O₂ davo
- SISTEMIK SINDROMLAR

NOTOLIQ AKKOMODATSIYA

- UZOQNI YAXSHI KÖRÖLMAUDI
- GAP REFRACTION > 1.0 DP
- AKKOMODATSIYA AMPLITUDASINI YOSHGA NISBATAN PASTLIGI
- SUBYEKTIV REFRAKSIYADA MINUS AFZAL KÖRISHI
- RETINOSKOPIYA NATIJALARI ÖZGARUVCHANLIGI

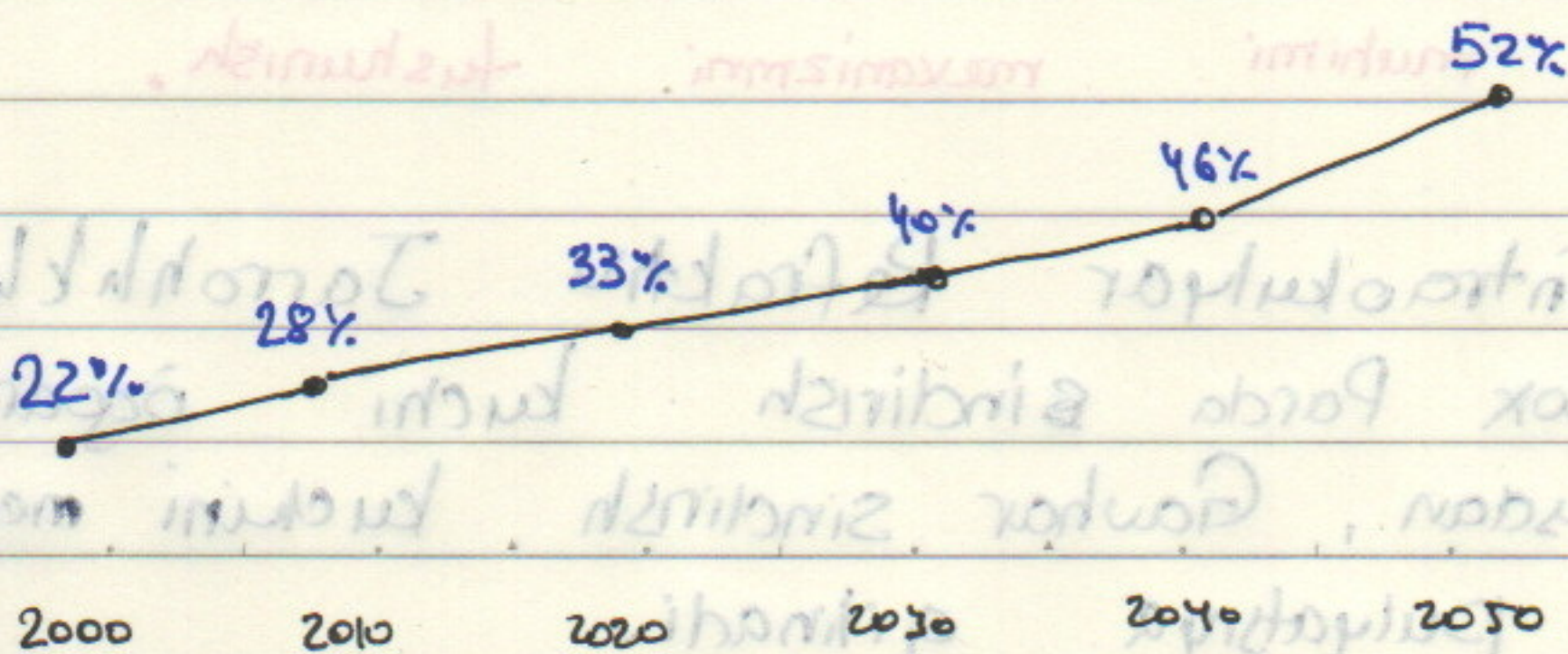
— AKKOMODATSIYA AMPLITUDASI



akk. amplitudasi. (Raff Pules orqali teksh.)
+ retinoskopiyaga qilinadi.

Davolash: Sikloplegiya, Manifest Rx (kozoynak) ...

EPIDEMIOLOGIYASI:



○ BOLALARDA KÖRISHNİ TEKSHIRUV DASTURI

- Tuğilgandan keyin 4-10 kun ichida
- 6 hafta, 3oy, 6oy, 1yil, 2yil
- Vizometriya 4 yoshda [shaklli Posterkaropeli] 2 eq

„DAVOLASH“ — KORREKSIYA

• KÖZ OYNAKLAR

• KONTAKT LINZALAR

- OPERATSIYALAR (Shox Parca Mur SINDIRISHINI ↓ hisobiga)
- (Intraokulyar refraktiv jarrohlk)

OPERATSIYALAR

- CORNEAL REFRAKTIV JARROHLIK
- INTRAOKULYAR REFRAKTIV JARROHLIK

Shox Parca otkaziladigan jarrohlk amalyotlari → Shox Parca usti qavaziglipini o'zgartirish hisobiga, uning sindirish kuchini o'zgartirish hisobiga fokus nuqtani siljirish

Turlari: Laser, Fek, Smile, Femtosecond ...

Bizga muhimi mexanizmini tushunish.

Intraokulyar Refraktiv Jarrohlklar — Shox Parca sindirish kuchi o'zgartirilmaydan, G'awhar sindirish kuchini manipulyatsiya qilinadi.

Gavhar normal holda 20 DPT, shuni 18 DP ga tushirsak, ko'zda (-2) ga bo'lgan ehtiyojni bartaraf qilgan belamiz.

2ta turi Boz:

1) Gavharni butunlay olib tashlab o'rniga linza qo'yish.

↑ Masalan: Ehtiyoj -10 edi, gavharni olib tashlaymiz (-20 DP), endi +10 ga ehtiyoj bo'ladi, va Gavhar o'rniga +10 lik linza qo'yiladi. ↓

Kamchiligi - Gavhar akkomodatsiyasini yo'qotamiz

(ISL) 2) Gavharning ustiga linza qo'yiladi, Gavhar olib tashlanmagan holda.