18-mavzu:

Misol. *y2=*4*x* parabolaning fokal radiusining uzunligi 26 ga teng bo`lgan nuqtani toping.

Yechish. Izlangan *N(x,y)* nuqta uchun ta’rifga ko`ra *r=FN=*26*,* 2*p=*4*, p=*2*.* *F(,*0*) ⇒ F*(1,0),26*==.* Bundan *x2+2x-675=0,* kvadrat tenglamani yechib, *x1=*25*, x2=-*27 ildizlarni topamiz. *x2=-*27 ildiz chet ildiz, chunki *y2=4x* parabolaning hamma nuqtalarining absissasi musbat. *y2=*4 *·*25*=*100*, y1=*10, *y2=-*10 topamiz.

Shunday qilib izlangan nuqta ikkita ekan *N1*(25,10)*, N2*(25,-10)*.*

Misol. *y2=9x* parabolaning *N0(1,-3)* nuqtasiga o`tkazilgan urinma tenglamasini yozing.

Yechish. *N0* nuqta parabolada yotishidan foydalanib,

 *(-3)2=2p.1 ⇒ 2p=9; p=* . (53.2)

 formuladan foydalanib *y(-3)=(x+1)* , ya’ni *3x+2y+3=0* urnima tenglamasini yozamiz

Misol. *y=x2+2x+3* parabola tenglamasini kanonik ko`rinishga keltiring va yangi koordinatalar boshining koordinatalarini toping.

Yechish. Berilgan tenglamani ushbu ko`rinishda yozamiz;

 *y=(x+2)2+1* yoki *y-1=(x+2)2*

Koordinatalar boshini

 *X=x’-2*

 *Y=y’+1*

Parallel ko`chirish yordamida *O→O’(-2,1)* nuqtaga ko`chiramiz. Yangi koordinatalar sistemasida parabola tenglamasi

 *Y’=x’2* yoki *x’2=2y’*

kanonik ko`rinishga ega bo`ladi.

M i s o l.  chiziqning Dekart reperiga nisbatan kanonik tenglamasini yozing.

YE ch i sh. Berilgan tenglamani (56.2)  ko’rinishga keltirish uchun o’ng tomonining surat va maxrajini 13 ga bo’lamiz:

 

buni (56.2) bilan taqqoslasak, ko’ramizki, , demak, egri chiziq ellipsdir. Uning kanonik tenglamasini yozamiz. Tenglamadan lekin  edi, bundan  ning bu qiymatlarini tenglikka qo’ysak, bundan  yoki  berilgan ellipsning kanonik tenglamasi

 