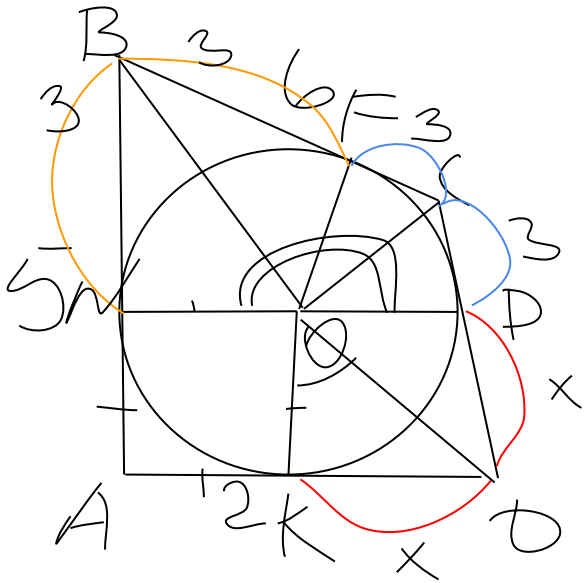
В 4-х угольник ABCD вписаны окружность радиуса 2. Угол DAB прямой. Стороны AB=5, BC=6
Найти площадь 4-х угольника ABCD



tip01 постараться найти уг DOK
tip02 ты легко можешь найти углы BON, FOC и NOK

r=2
BC+AD=AB+CD
6+(2+x)=5+(3+x)
BO=V(9+4)=V13
S(NBFO)=BN*NO=6
S(FCDO)=CD*OD=6
S(ANOK)=4
tgBON=3/2 =>BON=arctg(3/2)
tgx=3/2
x=arctg(3/2)+Pk
tgFOC=3/2 =>FOC=BON=arctg(3/2)
NOP=4arctg(3/2)
DOK=(270-4arctg(3/2))/2=135-2arctg(3/2)
tgKOD=x/2
x/2=tg(3P/4-2arctg(3/2))
x=2(tg(3P/4)-tg(2arctg(3/2))/(1+tg(3P/4)*tg(2arctg(3/2))=
=2(-1+12/5)/(1+12/5)=2(7/5)/(17/5)=14/17
tg(2arctg(3/2))=2tg(arctg(3/2))/(1-tg^2(acrtg(3/2))=
=2*3/2 / (1-9/4)=3/(-5/4)=-12/5
S(OKDP)=2*14/17=28/17
S(ABCD)=16+28/17=300/17
Answer:300/17

tg(x-y)=sin(x-y)/cos(x-y)=
=(sinx*cosy-cosx*siny)/(cosx*cosy+sinx*siny)=
(sinx*cosy-cosx*siny)/(cosx*cosy) / (cosx*cosy+sinx*siny)/(cosx*cosy)=
=((sinx*cosy/cosx*cosy)-(cosx*siny/cosx*cosy)) /
/ ((cosx*cosy/cosx*cosy)+(sinx*siny/cosx*cosy))=
=(sinx/cosx-siny/cosy) / (1+sinx*siny/cosx*cosy)=
=(tgx-tgy) / (1+tgx*tgy)

tg(x-y)=(tgx-tgy) / (1+tgx*tgy)

tg2x=sin2x/cos2x=2sinx*cosx/(cos^2x-sin^2x)=
=(2sinx*cosx/cos^2x)/((cos^2x-sin^2x)/cos^2x)=
=2sinx/cosx / (1-sin^2x/cos^2x)= 2tgx/(1-tg^2x)

tg2x=2tgx/(1-tg^2x)