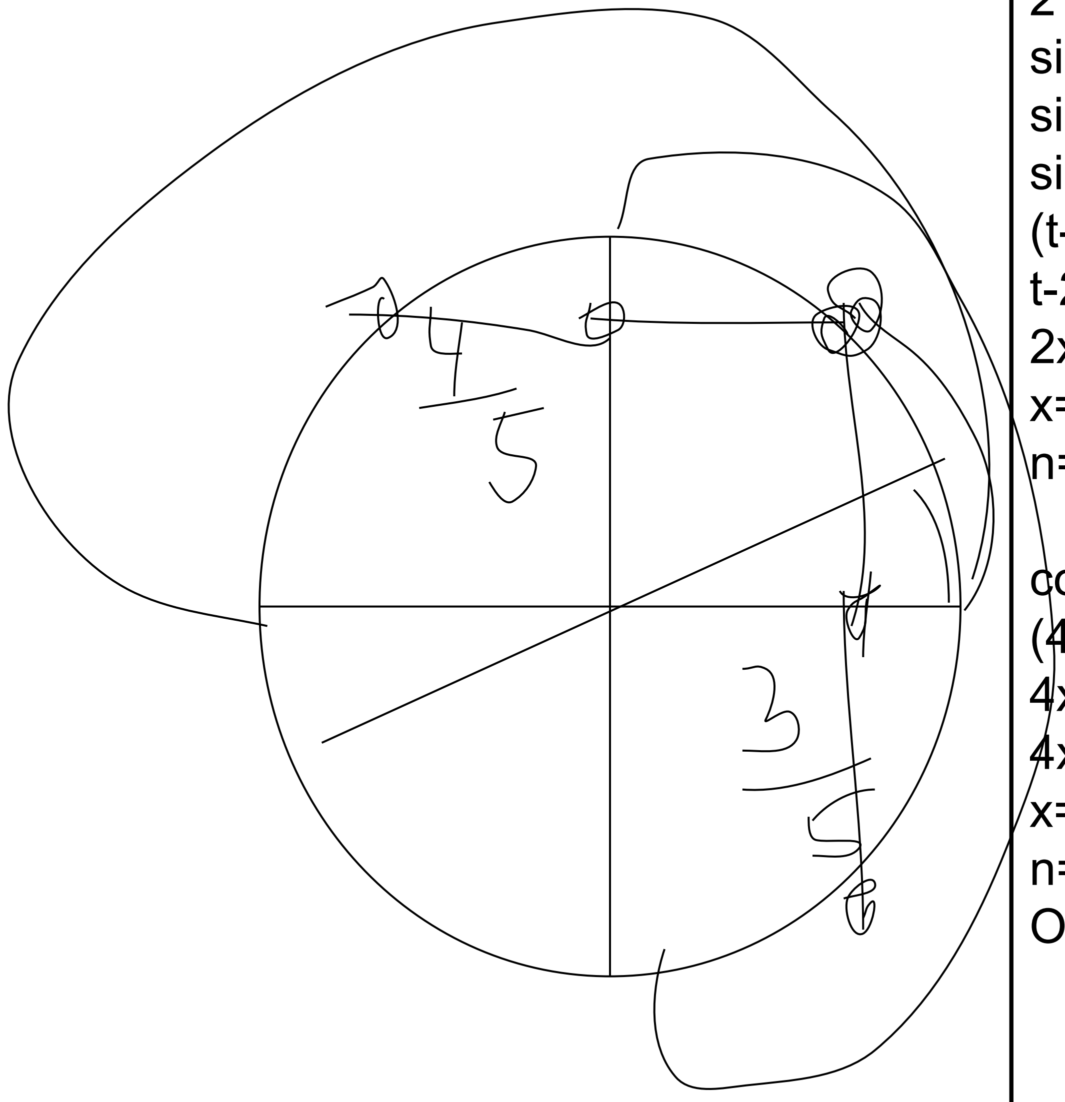
sin2x+2sinx=1+cosx
найти решения на промежутке [-4;-3]
2sinx*cosx+2sinx-cosx=1
2sinx*(cosx+1)=(cosx+1)
2sinx*(cosx+1)-(cosx+1)=0
(cosx+1)(2sinx-1)=0
2sinx=1
sinx=½
x=P/6+2Pn
x=5P/6+2Pn

cosx+1=0
cosx=-1
x=P+2Pn

-4<=P/6+2Pn<=-3
-4-P/6<=2Pn<=-3-P/6
-2/P-1/12<=n<=-3/2P-1/12
-41/60<=n<=
Решений нет
-4<=5P/6+2Pn<=-3
-4-5P/6<=2Pn<=-3-5P/6
-2/P-5/12<=n<=-3/2P-5/12
-61/60<=n
n=-1
x=5P/6-2P=P(⅚-2)=P*(-7/6)=-7P/6
-4<=P+2Pn<=-3
-4-P<=2Pn<=-3-P
-2/P-½<=n<=-3/2P-½
n=-1
x=P-2P=-P
Ответ: -7P/6; -P



3cosx+4sinx=5sin3x
найти решения на промежутке [0;P/2]
5*(3cosx/5+4sinx/5)=5sin3x
⅗=cost
⅘=sint
t=arcsin4/5=arccos3/5
5*(sinx*cost+cosx*sint)=5sin3x
sin(x+t)=sin3x
sin(x+t)-sin3x=0
sinx-siny =2sin((x-y)/2)*cos((x+y)/2)
2*sin((x+t-3x)/2)*cos((x+t+3x)/2)=0
sin((x+t-3x)/2)*cos((x+t+3x)/2)=0
sin((x+t-3x)/2)
sin((t-2x)/2)=0
(t-2x)/2=Pn
t-2x=2Pn
2x=t-2Pn
x=t/2-Pn=arcsin(⅘)/2-Pn
n=0=> x=arcsin(⅘)/2

cos((x+t+3x)/2)=0
(4x+t)/2=P/2+Pn
4x+t=P+2Pn
4x=P+2Pn-t
x=P/4+Pn/2-t/4=P/4+Pn/2-arcsin(⅘)/4
n=0   x=P/4-arcsin(⅘)/4
Ответ: arcsin(⅘)/2; P/4-arcsin(⅘)/4