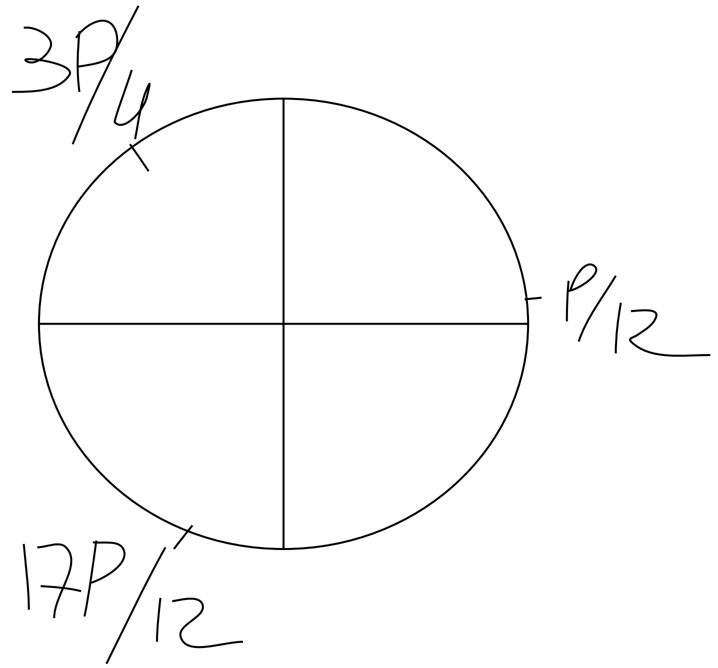
sinx - sin15x*cosx = 3/2
sinx - sin15x*cosx=
=V(1+sin^2(15x))[sinx*1/V(1+sin^2(15x))+cosx*-
-sin15x/V(1+sin^2(15x)]=V(1+sin^2(15x))[sinx*cost+
+cosx*sint]=V(1+sin^2(15x))sin(x+t)
V(1+sin^2(15x))sin(x+t)!=3/2
Решения нет
Тк левая часть мак равна V2, а пр 1,5=> они не равны
cost=1/V(1+sin^2(15x)
sint=-sin15x/V(1+sin^2(15x)
подсказка
Asinx +Bcosx = 3/2
A=1   B=-sin15x



sin3x - 2sin18x*sinx = 3V2 - cos3x + 2cosx
sin3x+cos3x=3V2+2sin18x*sinx+2cosx
V2[sin3x*1/V2+cos3x*1/V2]=V2[sin3x*cosP/4+cos3x*sinP/4]=V2sin(3x+P/4)
cost=1/V2
sint=1/V2
t=P/4
2sin18x*sinx+2cosx=V(4+4sin^2(18x))[sinx*2sin18x/V(4+4sin^2(18x))+cosx*2/V(4+4sin^2(18x))]=
=V(4+4sin^2(18x))[sinx*cost+cosx*sint]=V(4+4sin^2(18x))sin(x+t)
cost=2sin18x/V(4+4sin^2(18x))
sint=2/V(4+4sin^2(18))

V2sin(3x+P/4)=3V2+V(4+4sin^2(18x))sin(x+t)
V2sin(3x+P/4)=3V2+2V(1+sin^2(18x))sin(x+t)
Оценка левой части
-1<=sin(3x+P/4)<=1 |*V2
-V2<=V2sin(3x+P/4)<=V2

Оценка правой части
-1<=sin(18x)<=1
0<=sin^2(18x)<=1| +1
1<=sin^2(18x)+1<=2 | V
1<=V(sin^2(18x)+1)<=V2 |*2
2<=2V(sin^2(18x)+1)<=2V2
-1<=sin(x+t)<=1
2V2>=2V(sin^2(18x)+1)sin(x+t)>=-2V2 |+3V2
V2<=2V(sin^2(18x)+1)sin(x+t)+3V2<=5V2

V2sin(3x+P/4)=V2
sin(3x+P/4)=1
3x+P/4=P/2+2Pk
x=P/6+2Pk/3-P/12
x=P/12+2Pk/3

Проверяем 3 найденные точки в пр части
x=P/12
3V2+2sin(18P/12)*sinP/12+2cosP/12=
=3V2+2sin3P/2*sinP/12+2cosP/12=
=3V2-2sinP/12+2cosP/12
2cosP/12-2sinP/12=V8[cosP/12*2/V8-sinP/12*2/V8]= =V8[cosP/12*sinP/4-sinP/12*cosP/4]=V8sin(P/4-P/12)=V8sinP/6
cost=2/V8=1/V2=V2/2
sint=2/V8=1/V2=V2/2
t=P/4
V8sinP/6=2V2/2=V2
Пр часть равна 4V2 => x=P/12-не подходит

x=3P/4
3V2+2sin54P/4*sin3P/4+2cos3P/4=
=3V2+V2sin27P/2-V2=V2sin27P/2+2V2=
=V2sin3P/2+2V2=-V2+2V2=V2

x=17P/12
3V2+2sin(3*17P/2)*sin17P/12+2cos17P/12=
=3V2+2sin3P/2*sin17P/12+2cos17P/12=
3V2-2sin17P/12+2cos17P/12
2cos17P/12-2sin17P/12=V8[cos17P/12*2/V8-
-sin17P/12*2/V8]=V8[cos17P/12*sint-sin17P/12*c
=V8sin(17P/12-P/4)=V8sin(14P/12)=V8sin(7P/6)=
=-V8/2=-V2
t=P/4

-V2+3V2=2V2
Пр часть равна 2V2=> x=17P/12- не подходит

Ответ:3P/4+2Pk