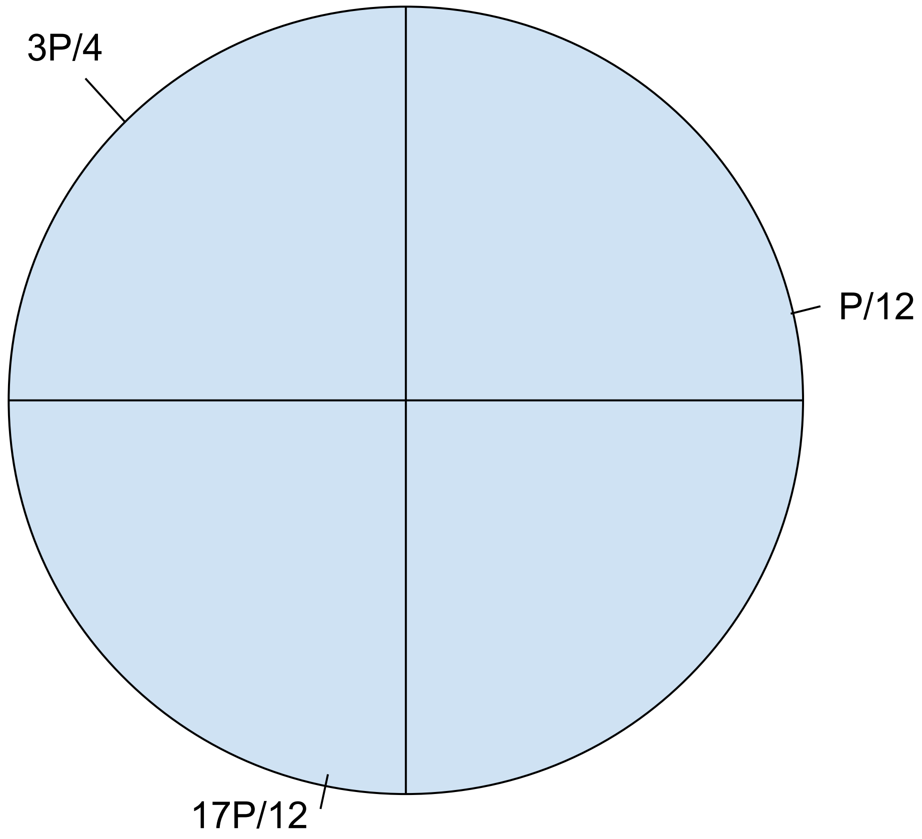
1***sinx** - sin15x***cosx** = 3/2

V(1+sin^2 15x)*(sinx/V(1+sin^2 15x)
-sin15x*cosx/V(1+sin^2 15x))=3/2
1/V(1+sin^2 15x)=cost
-sin15x/V(1+sin^2 15x)=sint
t=t
V(1+sin^2 15x)*(sinx*cost+sint*cosx)=3/2
V(1+sin^2 15x)*sin(x+t)=3/2
-1<=sin(x+t)<=1
0<=sin^2 15x<=1
1<=V(1+sin^2 15x)<=V2
-V2<=V(1+sin^2 15x)*sin(x+t)<=V2
Решений нет



sin3x - 2sin18x*sinx = 3V2 - cos3x + 2cosx
sin3x+cos3x=3V2+2sinx*sin18x+2cosx
V2*(sin3x/V2+cos3x/V2)=3V2+V(4sin^2 18x+4)*(sinx/V(4sin^2 18x+4)+cosx/V(4sin^2 18x+4))
1/V2=sint
1/V2=cost
t=P/4
V(4sin^2 18x+4)=sink
V(4sin^2 18x+4)=cosk
k=k
V2*(sin3x*cosP/4+sinP/4*cos3x)=3V2+V(4sin^2 18x+4)*(sinx*cosk+sink*cosx)
V2*sin(3x+P/4)=3V2+V(4sin^2 18x+4)*sin(x+k)
-V2<=V2*sin(3x+P/4)<=V2
2<=V(4sin^2 18x+4)<=V8
-V8<=V(4sin^2 18x+4)*sin(x+k)<=V8
-2V2+3V2<=V(4sin^2 18x+4)*sin(x+k)+3V2<=2V2+3V2
V2<=V(4sin^2 18x+4)*sin(x+k)+3V2<=5V2
Левая и правая части могут быть равны, только когда каждая из них - это V2
V2*sin(3x+P/4)=V2
sin(3x+P/4)=1
3x+P/4=P/2+2Pn
3x=P/4+2Pn
x=P/12+2Pn/3
P/12+2P/3=P/12+8P/12=9P/12=¾*P
P/12+4P/3=P/12+16P/12=17P/12

x1=P/12+2Pn
x2=3P/4+2Pn
x3=17P/12+2Pn
Проверим эти серии на равенство V2 правой части методом подстановки (подставлять будем в начальный вид правой части 3V2+2sinx*sin18x+2cosx):

x1: 3V2+2*sin(P/12+2Pn)*sin(18P/12+36Pn)+2cos(P/12+2Pn)=3V2+2*sinP/12*sin3P/2+2*cosP/12=
3V2-2sinP/12+2cosP/12=3V2-2(sinP/12-cosP/12)=3V2-2V2(sinP/12(V2/2)-cosP/12(V2/2))=
=3V2-2V2(sinP/12*cosP/4-cosP/12*sinP/4)=3V2-2V2*sin(P/12-P/4)=3V2-2V2*sin(-P/6)=
=3V2-2V2*(-½)=4V2!= V2 => **x1 не подходит**
x2:
3V2+2sin(3P/4+2Pn)*sin(54P/4+36Pn)+2cos(3P/4+2Pn)=3V2+2*sin3P/4*sin54P/4+2*cos3P/4=
=3V2+V2*sin54P/4-V2=V2(2+sin54P/4)=V2(2+sin27P/2)=V2(2+sin(27P/2 - 24P/2)) =V2(2+sin(3P/2))= V2(2-1)= V2 - **ПОДХОДИТ**
x3:
3V2+2*sin(17P/12+2Pn)*sin(51P/2+36Pn)+2*cos(17P/12+2Pn)=3V2+2*sin17P/12*sin51P/2+2*cos17P/12=3V2+2*sin17P/12*sin(51P/2-48P/2)+2*cos17P/12=3V2+2*sin17P/12*sin(3P/2)+2*cos17P/12=3V2-2*sin17P/12+2*cos17P/12=3V2-2*(sin17P/12-cos17P/12)=3V2-2*V2*(sin17P/12*1/V2-cos17P/12*1/V2)=3V2-2V2*(sin17P/12*cosP/4-sinP/4*cos17P/12)=3V2-2V2*sin(17P/12-P/4)=3V2-2V2*sin7P/6=3V2+V2=4V2=> **x3 не подходит**

Ответ:3P/4+2Pn