sin^6 x + cos^6 x = sinx*cosx
cos^2 x=(cos2x+1)/2
sin^2 x=(1-cos2x)/2
(sin^2 x)^3+(cos^2 x)^3=sinx*cosx
((1-cos2x)/2)^3+((cos2x+1)/2)^3=sinx*cosx
(1-cos2x)^3 /8+(cos2x+1)^3 /8=sinx*cosx |*8
(1-cos2x)^3+(cos2x+1)^3=8*sinx*cosx
a^3+b^3=(a+b)(a^2-ab+b^2)
((1-cos2x)+(cos2x+1))((1-cos2x)^2-(1-cos2x)(1+cos2x)+
+(cos2x+1)^2)
(1-cos2x+cos2x+1)*((1-2cos2x+cos^2 2x)-
-(1+cos2x-cos2x-cos^2 2x)+(cos^2 2x+2*cos2x+1))
2*(1-2cos2x+cos^2 2x-1-cos2x+cos2x+cos^2 2x+cos^2 2x+
+2cos2x +1)
2*(1+3*cos^2 2x)=8*sinx*cosx |:2
1+3*cos^2 2x=4sinx*cosx
1+3*(1-sin^2 2x)=2*sin2x
1+3-3sin^2 2x=2sin2x
3sin^2 2x+2sin2x-4=0
Sin 2x=t
3t^2+2t-4=0
D=1+12=13
t1=(-1+V(13))/3
t2=(-1-V(13))/3   не подходит
Sin 2x=(-1+V(13)/3
x=(arcsin(-1+V(13)/3))/2+Pn
x=P/2-(arcsin(-1+V(13)/3))/2+Pn
Ответ: (arcsin(-1+V(13)/3))/2+Pn; P/2-(arcsin(-1+V(13)/3))/2+Pn

sin^5 x + cos^5 x = 1
sin^5 x+cos^5 x=sin^2 x+cos^2 x
sin^5 x-sin^2 x+cos^5 x-cos^2 x=0
sin^2 x*(sin^3 x-1)+cos^2 x*(cos^3 x-1)=0
sin^2 x*((sinx-1)(sin^2 x+sinx+1)+cos^2 x*((cosx-1)(cos^2 x+cosx+1)=0
(1-cos^2 x)*((sinx-1)(sin^2 x+sinx+1)+(1-sin^2 x)*((cosx-1)(cos^2 x+cosx+1)=0
(1-cosx)(1+cosx)*(sinx-1)(sin^2 x+sinx+1)+(1-sinx)(1+sinx)(cosx-1)(cos^2x+cosx+1)=0
(-1)*(cosx-1)(1+cosx)*(sinx-1)(sin^2 x+sinx+1)+(-1)*(sinx-1)(1+sinx)(cosx-1)(cos^2x+cosx+1)
(cosx-1)(1+cosx)*(sinx-1)(sin^2 x+sinx+1)+(sinx-1)(1+sinx)(cosx-1)(cos^2x+cosx+1)=0
(sinx-1)*(cosx-1)*((1+cosx)(sin^2 x+sinx+1)+(sinx+1)(cos^2x+cosx+1))=0
sinx-1=0
sinx=1
x=P/2+2Pn
cosx-1=0
cosx=1
x=2Pn
(1+cosx)(sin^2 x+sinx+1)+(sinx+1)(cos^2x+cosx+1)=0
1+cosx>=0
sinx+1>=0
sin^2 x+sinx+1>0
cos^2x+cosx+1>0

1+cosx=0
sinx+1=0
Решения нет, так как sin и cos одного угла не могут одновременно быть -1
Ответ: P/2+2Pn; 2Pn