8cos^4 x = 11cos2x -1
8(cos^2 x)^2 = 11cos2x -1
8((1+cos2x)/2)^2 = 11cos2x -1
8(1+cos2x)^2/4 = 11cos2x -1
2(1+cos2x)^2 = 11cos2x -1
2(1+2cos2x+cos^2(2x)) = 11cos2x -1
2+4cos2x+2cos^2(2x) = 11cos2x -1
cos2x=t
3-7t+2t^2=0
2t^2-7t+3=0
D=49-24=25
t1=(7+5)/4=3
t2=(7-5)/4=½
cos2x=½
2x=+-P/3+2Pk
x=+-P/6+Pk
Ответ: x=+-P/6+Pk

sin^4 x + cos^4 x = sinx*cosx
1 способ
((1-cos2x)/2)^2 + ((1+cos2x)/2)^2 = sinx*cosx
(1-cos2x)^2/4 + (1+cos2x)^2/4 = sinx*cosx
[(1-cos2x)^2 + (1+cos2x)^2]/4 = sinx*cosx
[1-2cos2x+cos^2(2x) + 1+2cos2x+cos^2(2x)]/4 = sinx*cosx
[2+2cos^2(2x)]/4 = sinx*cosx
[1+cos^2(2x)]/2 = sinx*cosx|*2
1+cos^2(2x) = 2sinx*cosx
1+cos^2(2x) = sin2x
2-sin^2(2x) = sin2x
sin2x=t
2-t^2 = t
t^2+t-2=0
t1=-2
t2=1
sin2x=1
2x=P/2+2Pk
x=P/4+Pk
Ответ:P/4+Pk

2 способ
sin^4 x + cos^4 x = sinx*cosx| + 2sin^2x*cos^2x
sin^4 x + cos^4 x + 2sin^2x*cos^2x = sinx*cosx + 2sin^2x*cos^2x
(sin^2 x + cos^2 x)^2= sinx*cosx + 2sin^2x*cos^2x
1= sinx*cosx + 2sin^2x*cos^2x
sinx*cosx=t
t+2t^2-1=0
D=1+8=9
t1=(-1+3)/4=½
t2=(-1-3)/4=-1
sinx*cosx=½
sin2x/2=½
sin2x=1
2x=P/2+2PK
x=P/4+Pk
sin2x=-2 (-----)
Ответ:P/4+Pk