**Задание (примеры) на разработку преобразований интервалов.**

1. (w,w) -> (w,w)

g(x) = (X+A)2\*k+1 +B

g\_inv(x) = (X-B)1/(2\*k+1) - A

1. (w,w) -> (-1,1)

g(x) = x/(x2 +C)1/2 , C>0

g\_inv(x) = C1/2 \*x\*(1-x2)1/2 ----------------🡪 g\_inv(x) = C1/2 \*x / (1-x2)1/2

1. (-Pi/2, Pi/2) -> (w,w)

g(x) = tg(x)

g\_inv(x) = arctg(x)

1. (0,w) -> (0,w)

g(x) = 1/x

g\_inv(x) = 1/x

1. (0,w) -> (w,0)

g(x) = -x

g\_inv(x) = -x

1. (w,w) -> (0,w)

g(x) = A\*exp(x+B) ,

g\_inv(x) = ln(x/A) - B

1. (a,b) -> (c,d)

g(x) = ( (c-d)/(a-b) ) \* x + (a\*d-b\*c)/(a-b)

g\_inv(x) = ( (a-b)/(c-d) ) \* x + (b\*c-a\*d)/(c-d)

1. (a,b) -> (c,d) // a, b, не равны нулю и не равны между собой; c и d не равны.

g(x) = ( (d - c)\*a\*b/(a-b) ) / x + (a\*c-b\*d)/(a-b)

g\_inv(x) = ( (b-a)\*c\*d/(c-d) ) / x + (c\*a-b\*d)/(c-d) ---- -----🡪

g\_inv(x) = ((d- c)\*a\*b/(x\*(a- b) - (a\*c - b\* d)))

1. (-Pi/2,Pi/2) -> (-1,1) .

g(x) = sin(x)

g\_inv(x) = arcsin(x)

1. (0,Pi) -> (-1,1)

g(x) = cos(x)

g\_inv(x) = arccos(x)