Покажите, что последовательность bn=(1-1/n)^n возрастающая

(1+x)^k >= 1+kx

b(n)=(1-1/n)^n
b(n+1)=(1-1/(n+1))^(n+1)
b(n+1) / b(n) = (1-1/(n+1))^(n+1) / (1-1/n)^n = (n/(n+1))^(n+1) / ((n-1)/n)^n =
n^(2n+1) / ((n+1)^(n+1) * (n-1)^n)=n^(2n+1) / ((n+1)^n * (n-1)^n * (n+1))=n^(2n+1) / ([(n+1)(n-1)]^n * (n+1))=n^(2n+1) / ([(n^2-1)]^n * (n+1)) =
=n/(n+1) * n^2n/[(n^2-1)]^n =n/(n+1) * [n^2/(n^2-1)]^n =n/(n+1) * [(n^2-1 + 1)/(n^2-1)]^n =
=n/(n+1) * [1 + 1/(n^2-1)]^n = применяем неравенство бернулли => n/(n+1) * (1+n/(n^2-1)) >=
>=n/(n+1) * (1+n/n^2)=n/(n+1) * (1+1/n) = n/(n+1) * (n+1)/n = 1