

> restart;

> I1:=Int(x*tan(x),x=0..Pi/6);

$$I1 := \int_0^{\frac{1}{6}\pi} x \tan(x) dx$$

> evalf(I1);

0.05069784420

> Rn:=cosh(3)*3^(2*n+3)/(2*n+3)!;

$$Rn := \frac{\cosh(3) 3^{(2n+3)}}{(2n+3)!}$$

> 0.5*10^(-4);

0.00005000000000

> evalf(subs(n=5,Rn));

0.002577654002

> evalf(subs(n=6,Rn));

0.0001104708858

> evalf(subs(n=7,Rn));

0.000003655286661

> ax:=(0.5*10^(-4)*7!/cosh(3))^(1/7);

$$ax := 0.24297810665040^{(1/7)} \left(\frac{1}{\cosh(3)} \right)^{(1/7)}$$

> evalf(ax);

0.5904869087

>