

# Romberg's scheme

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9:24 PM

$T_{1,1}$  = repeated trapezium on 1 interval

$T_{2,1}$  = repeated trapezium on 2 subintervals

$T_{3,1}$  = repeated trapezium on  $2^2$  subintervals

$\vdots$

$T_{n,1}$  = repeated trapezium on  $2^{n-1}$  subintervals

$$T_{i,j} = \frac{4^{-j+1}T_{i-1,j-1} - T_{i,j-1}}{4^{-j+1} - 1}, i = 2, \dots, n, j = 2, \dots, i.$$

$T_{1,1}$

$T_{2,1}$   $T_{2,2}$

$T_{3,1}$   $T_{3,2}$   $T_{3,3}$

$\vdots$

$T_{n,1}$   $T_{n,2}$  ...  $T_{n,n-1}$   $T_{n,n}$