

M353 5.3 Romb (S. Zhang) .

1. (5.3:a1) Find (1) $T_{h=1}$, (2) $T_{h=1/2}$ by the recursive formula, (3) $T_{h=1/4}$ by the recursive formula, (4) Romberg R_{33} and (5) Simpson $S_{h=1/2}$ for

$$\int_1^2 8x^3 dx.$$

2. (5.3:a2) Suppose we are given

$$T_{h=8} = 20, T_{h=4} = 10, T_{h=2} = 6, T_{h=1} = 4$$

find the Romberg integral R_{44} .