

M353 5.2 Integral (S. Zhang) .

1. (5.2:a1) Compute $\int_1^3 x^5 dx$ by the Trapezoidal rule with $m = 1$ and $m = 2$, and extrapolation. Find the error each case.
2. (5.2:a2) Compute $\int_1^3 x^5 dx$ by the mid-point rule with $m = 1$ and $m = 2$, and extrapolation. Find the error each case.
3. (5.2:a3) Compute $\int_1^3 x^5 dx$ by the Simpson's rule with $m = 1$ ($h = 1!$) and $m = 2$, and extrapolation. Find the error each case.