

Digest 5

(A compilation of emailed homework questions, answered around Wednesday.)

Question. [Exercise 1] (From a student): I computed:

$$T(4) = -16.25, M(4) = -14.625, S(4) = -17.33$$

And the integral is equal to -14.67 which makes $M(4)$ the most accurate, but when I compute the error bounds it shows that:

$T(4)$ has 8.3% error, $M(4)$ has 4% error, And $S(4)$ has error of $K(4)/5760$

With $f(x) = 9 - x^2$ I can't find the 4th derivative of $f(x)$. It would be 0. Since we assume that $[K(4) > \text{the fourth deriv.}]$ Would $K(4)$ be a fraction?

And wouldn't $S(4)$ have to be more accurate since it's percent error is less?

Answer. I recommend that you re-check your calculations; one of them is incorrect, and when you fix it, you should see what to do after that.