In-class questions Week 2 Session 1 & 2

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1

Three significant digits are expected to be correct after an iterative process is finished. The pre-specified tolerance, in this case, needs to be less than or equal to

- 0.5%
- 0.05%
- 0.005%
- 0.0005%

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2

The base-10 equivalent of $(1101)_2$

- 11
- 12
- 13
- 14

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3

The base-10 equivalent of $(0.1101)_2$ is

- 0.6875
- 0.75
- 0.8125
- 0.875

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4

How Many Significant Digits?

https://bit.ly/3R7tn1J

5

For a 8-bit fixed-point binary format with 3 bits for integer part and 5 bits for fractional part, $(2.4)_{10}$ would be expressed as

- 10.00110
- 10.011
- 010.01100
- 010.00110

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6

In a five-bit fixed binary representation, $(0.1)_{10}$ is represented as $(0.00011)_2$. The true error calculated in this representation most nearly is (answer is in base-10 equivalent)

- 0.00625
- 0.053125
- 0.09375
- 9.5×10^{-8}

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7

A function $f(x)$ and all its derivatives exist and are continuous in the interval $[2, 5]$. If $f(2) = 50, f'(2) = 15, f''(2) = 28$ and other higher derivatives are NOT given to you at $x = 2$, what is the best estimate you can give for $f(5)$?

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