

## In-class questions Week 2 Session 1 & 2



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

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12  
13  
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**The base-10 equivalent of  $(0.1101)_2$  is**

0.6875  
0.75  
0.8125  
0.875

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How Many Significant Digits?



<https://bit.ly/3R7tn1J>

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**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  
 $9.5 \times 10^{-8}$

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**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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