

**MATH101 - QUIZ 4**

Term 181

**Professor :** Kroumi Dhaker

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**Give all details**

Let  $f(x) = \frac{e^x}{e^x+1}$ . Find

1. The domain of  $f$ .
2. The vertical asymptotes if any.
3. The horizontal asymptotes if any.
4. The first derivative  $f'$  and the interval of increase and decrease.
5. The local maximum and local minimum.

6. The second derivative  $f''$  and the interval of concavity.

7. The inflection points if any.

8. The  $x$ -intercepts and  $y$ -intercept if any.

9. Using previous informations to sketch the curve of  $f$ .