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PS C:\Users\USER> & C:/Users/USER/AppData/Local/Microsoft/WindowsApps/python3.10.exe c:/Users/USER/Desktop/113_2/數值方法不應該長這樣/hw3_1.py
```

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Degree 1: Lagrange approximation = 0.732077, Error bound = 4.420000e-04
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Degree 2: Lagrange approximation = 0.731716, Error bound = 2.652000e-06
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Degree 3: Lagrange approximation = 0.731704, Error bound = 3.513900e-08
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```
Degree 4: Lagrange approximation = 0.731704, Error bound = 3.513900e-08
```

```
PS C:\Users\USER> & C:/Users/USER/AppData/Local/Microsoft/WindowsApps/python3.10.exe c:/Users/USER/Desktop/113_2/數值方法不應該長這樣/hw3_2.py
```

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Approximate solution to  $x - e^{-x} = 0$ :  $x \approx 2.288173$ 
```

```
PS C:\Users\USER> & C:/Users/USER/AppData/Local/Microsoft/WindowsApps/python3.10.exe c:/Users/USER/Desktop/113_2/數值方法不應該長這樣/hw3_3.py
```

```
當  $t = 10$  秒時，預測距離為 768.96 英尺，預測速度為 74.64 英尺/秒
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汽車首次超過限速 55 mi/h 的時間為  $t \approx 3.15$  秒
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```
預測最大速度為 92.04 英尺/秒，發生於  $t \approx 4.06$  秒
```

```
PS C:\Users\USER>
```