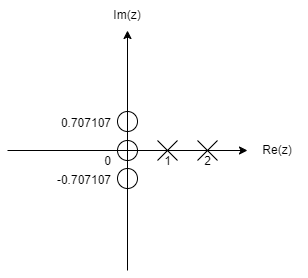
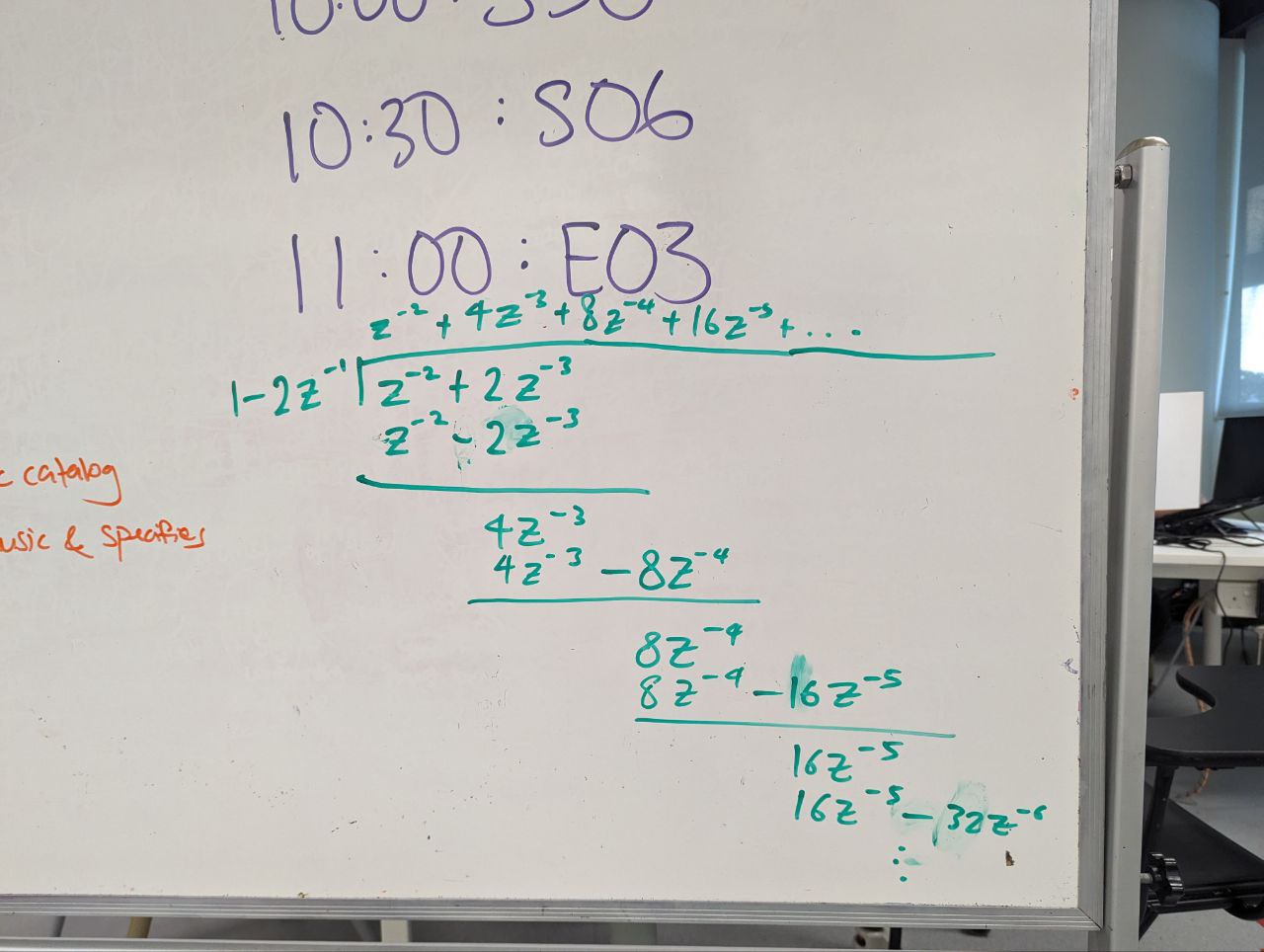
Tham Jit 1005036 HW3

2. 1. Poles zeros
   2. Poles = 0,0,2 zeros=-2

Direct division:



* 1. Poles = 1,2

|  |  |
| --- | --- |
|  |  |

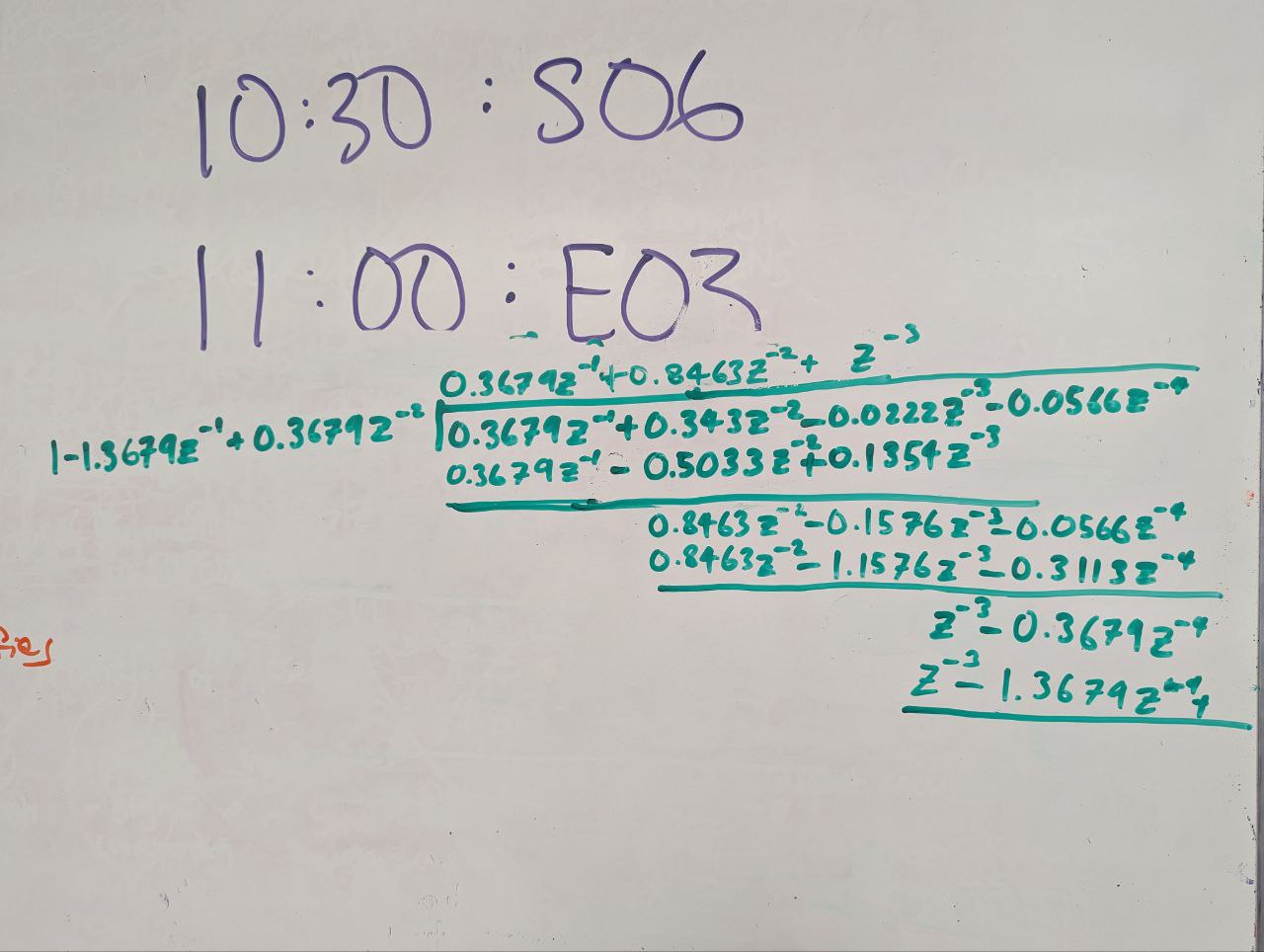
Poles = 0.5,0.8,0.8

Since poles are within unit circle, system is stable



Let

Direct division:





Jury Stability

|  |
| --- |
| passed |
| passed |
| Since pole on unit circle, system is marginally stable |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Row |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  | | | | |  | |  |  | | | | |  | |  |  | | | | |  | |  |  | | | | |  | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |  |  | | | | |  | |  |  | | | | |  | |  |  | | | | |  | |  |  |  |  |  |  |  |   Jury Stability Table  passed |

System is marginally stable

Jury Stability

|  |
| --- |
| passed |
| passed |
| passed |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  | | | |  | |  |  | | | |  | |  |  | | | |  | |  |  |  |  |  |  |   Jury Stability Table  passed |

System is stable. Hence, there are no roots that lie outside the unit circle



Jury Stability

|  |
| --- |
| passed |
| passed |
| failed |

System is unstable