Discussion problem assignment:

第一题：

1. For an LTI system with system function $H(s)=\dfrac{(s+2)}{(s+1)(s+3)}$ and another system $g(t)=e^{2t}h(t)$

It is known that the system $g(t)$ is stable. For the system $H(s)$, determine $h(t)$ and whether the system is causal or stable.

第二题：

2. Consider a causal LTI system with H(s). Its pole-zero plot is given in the figure and $\lim_{t\to 0^+} h(t)=2$

(a) Determine the system function H(s).

(b) Determine the unit impulse response h(t). Is the system stable?