# Handout 16: Describing functions, More

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**Continuing on the switch nonlinearity**

$$G(s) = \frac{1}{(s+1)^3}$$

Equation for the existence of sustained oscillations:

**Another case:**

$$G(s) = \frac{1}{s(s+1)}$$

Can there exist sustained oscillations?

**Computing describing functions for sinusoidal signals**
**Example: Switch nonlinearity**

**Now for the real Math**

**More real math! - Hopefully not too many mistakes**