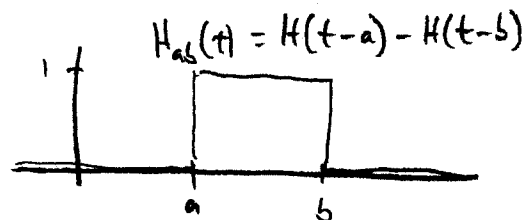
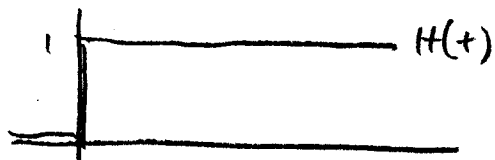


Week 11 Summary:

- Piecewise continuous functions can be written concisely using the Heavyside function:



- Shifts in the t -domain correspond to multiplication by exponentials in the s -domain (and vice-versa)

$$\times \mathcal{L}(e^{ct} f(t)) = F(s-c) \quad (-\infty < c < \infty)$$

$$\times \mathcal{L}(f(t-c)H(t-c)) = e^{-cs} F(s) \quad (0 \leq c < \infty)$$

- If $f(t)$ is periodic with period T and "window"

then
$$F(s) = \frac{1}{1 - e^{-sT}} = \overline{F}_T(s) [1 + e^{-sT} + e^{-2sT} + e^{-3sT} + \dots]$$

