

EE 2000 Assignment # 11

(taken from Dr. Jingxian Wu, University of Arkansas, 2020.)

1. Find the bilateral Laplace transform of the following signals.

(a) $\exp(t + 1)$

(b) $|t|$.

(c) $\exp(-2|t|)$.

(d) $\cos(at)u(-t)$.

2. Find the unilateral Laplace transform of the following signals.

(a) $x(t) = t \cdot \text{rect}\left(\frac{t-1}{2}\right)$

(b) $x(t) = Au(t) + 2\delta(t)$.

(c) $x(t) = A \cos(\omega_0 t + \theta)$.

(d) $x(t) = A \sin(\omega_0 t + \theta)$.