Submitting HW Tips

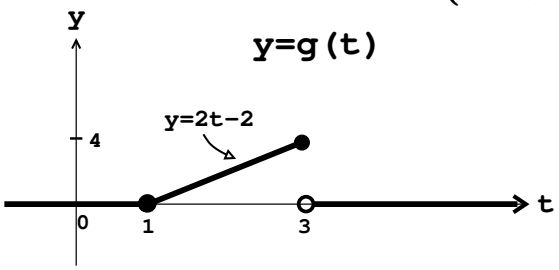
HW #10

1 Find the Laplace Transform of $g(t)$, denoted by $\mathcal{L}\Big\{g(t)\Big\}$, when

(a) $g(t) = \Big(t^2 - 1\Big)$

(b) $g(t) = u_3(t)\,\Big(t^2 - 1\Big)$

(c) $g(t)$ is this piecewise continuous function: $g(t) = \begin{cases} 0, & 0 \le t \le 1 \\ 2t-2, & 1 < t \le 3 \\ 0, & 3 < t < \infty \end{cases}$



2 Find the *inverse* Laplace Transform of $G(s)$, denoted by $\mathcal{L}^{-1}\Big\{G(s)\Big\}$, when:

(a) $G(s) = \dfrac{8}{(s+1)^5}$ **(b)** $G(s) = e^{-2s}\Big[\,\dfrac{8}{(s+1)^5}\,\Big]$ **(c)** $G(s) = \dfrac{30\,e^{-8s}}{s^2 - 2s + 10}$

3 **Section 6.5:** #1(a).

4 **Section 6.6:** #6, 11.