6] Integral property.
$L[f(t)] = F(s)$ then

$$L\left[\int_0^t f(t)\,dt\right] = \frac{F(s)}{s}$$

7] Grarma function

$\gamma(n+1) = n\gamma n$ $\qquad L[t^n] = \frac{\gamma(n+1)}{s^{n+1}}$

$\gamma n = (n-1)\gamma(n-1)$ $\qquad \gamma(-1/2) = -2\sqrt{\pi}$

$\gamma 1/2 = \sqrt{\pi}$

one root ⇒
two roots ⇒
equal roots
three roots
two ro
⇒
Roots