4/23/19

27.1

(a): Let's write this boya down!

~~$g(t) =$~~ $M(t) = \int_0^\infty x^{t-1} e^{-x}\, dx = \Gamma(t)$.

That was (Easy).

(b): We are to compute

$$\int_0^\infty e^{-tx}\, dx = \left[\frac{-e^{-tx}}{t}\right]_0^\infty = 0 - \left(\frac{-e^{-0}}{t}\right)$$

$$= \frac{1}{t}$$