3) a)
If the model is $Y_i \sim \text{Poisson}(\mu_i)$ and $\log(\mu_i) = \beta_0 + \beta_1 x_i$, then we have:

$\log(\mu_i) = \beta_0 + \beta_1 x_i$

$\mu_i = \exp(\beta_0 + \beta_1 x_i)$

$\mu_i = \exp(1 + 0.5 \times 5) = \exp(3.5)$

So, the maximum likelihood estimate of μ_i is $\exp(3.5) = 33.11$