

- In an effort to control vegetation overgrowth, 100 rabbits are released into an isolated area that is free of predators. After one year, the rabbit population has increased to 500. Assuming exponential population growth, what will the population be after another 6 months?

$$P(t) = P_0 a^t$$

$$P(0) = P_0 = 100$$

$$P(1) = 100a = 500 \Rightarrow a = 5$$

$$P(t) = 100 (5^t)$$

$$P(1.5) = 100 (5^{1.5}) \approx 759$$