Name: _____ **Show work needed to justify your answer.** Date: _____

HW: # 38c: Math IBSL - Standard 37 - Exponents

5 points

---

4 The growth of a fungus on a tree is modelled by $G(t) = 4500e^{0.3t}$, where G cm^2 is the area covered by the fungus after t days.

a Find the initial area covered by the fungus.

b Determine the area the fungus will cover after 10 days have passed.

---

7 The value of a car decreases by 15% every year. Tatiana buys a new car for $25 000.

a Write down a function to model the value of the car after t years.

b Find the value of Tatiana's car after three years, to the nearest $100.

c Tatiana will sell the car when its value decreases to $10 000. Use a graph to determine how old the car will be when Tatiana sells it.