**Differentiation exponential and log functions**

**Quickfire Questions**

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**‘Meatier’ Example:**

**A rabbit population after years can be modelled using . Determine after how many years the rate of population increase will reach 20,000 rabbits per year.**

**Test Your Understanding**

1. **Differentiate**  *(Hint: Expand first)*

**2.** **A child has headlice and his parents treat it using a special shampoo. The population of headlice after days can be modelled using**

**a) Determine how many days have elapsed before the child has 20 headlice left.**

**b) Determine the rate of change of headlice after 3 days.**

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