10. **In this question you must show all stages of your working.**
Solutions relying entirely on calculator technology are not acceptable.

Pam monitors the number of users of a social media website.
The number of users, N million, is modelled by the equation

$$N = 17 + 25e^{0.08t}$$

where t is the time, in months, after monitoring began.

Using the model,

(a) find the value of t when the number of users was 65 million, giving your answer to one decimal place,

(3)

(b) find the rate of increase in the number of users with respect to time, exactly 2 **years** after monitoring began.
Give your answer to 3 significant figures.

(3)

(c) State a limitation of the model.

(1)