

### 'A Shrinking Rainforest'

a) Equation will be of the form  $S = 300,000 \times x^t$

When  $t = 0, S = 300,000$ , when  $t = 1, S = 294,000$

Therefore  $x = \frac{49}{50}$

Thus equation is:  $S = 300,000 \times \frac{49^t}{50}$

[4 marks]

b) Using the equation found in (a):

When  $t = 30, S = 164,000$ (3. s. f)

Comparative statement.

e.g. the exponential model predicts a value close to the true value, thus the model is reliable.

[2 marks]

c) Make the coefficient,  $x$ , closer to one.

[1 mark]