

12. An advertising agency is monitoring the number of views of an online advert.

The equation

$$\log_{10} V = 0.072t + 2.379 \quad 1 \leq t \leq 30, t \in \mathbb{N}$$

is used to model the total number of views of the advert, V , in the first t days after the advert went live.

(a) Show that $V = ab^t$ where a and b are constants to be found.

Give the value of a to the nearest whole number and give the value of b to 3 significant figures.

(4)

(b) Interpret, with reference to the model, the value of ab .

(1)

Using this model, calculate

(c) the total number of views of the advert in the first 20 days after the advert went live.
Give your answer to 2 significant figures.

(2)