**9** Canopus and Sirius are two stars.

Radiation from Sirius has 3 times the intensity of radiation from Canopus.
The distance of Canopus from Earth is 36 times the distance of Sirius from Earth.

Canopus has a luminosity $L_C$ and Sirius has a luminosity $L_S$.

Which of the following is equal to the ratio $\dfrac{L_C}{L_S}$?

- ☒ **A** $\dfrac{1}{3} \times \left(\dfrac{1}{36}\right)^2$

- ☒ **B** $3 \times \left(\dfrac{1}{36}\right)^2$

- ☒ **C** $\dfrac{1}{3} \times (36)^2$

- ☒ **D** $3 \times (36)^2$

**(Total for Question 9 = 1 mark)**