SECTION B

Answer ALL questions in the spaces provided.

11 Sirius is the brightest star in the night sky. The intensity of Sirius is measured to be $1.09 \times 10^{-7}\,\mathrm{W\,m^{-2}}$.

Calculate the distance of Sirius from the Earth.

luminosity of Sirius $= 8.94 \times 10^{27}\,\mathrm{W}$

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Distance of Sirius from the Earth = ...

(Total for Question 11 = 2 marks)