

13 Aldebaran is a red giant star.

For a black body radiator of Aldebaran's surface temperature, the wavelength λ_{max} at which the intensity is maximum is $7.43 \times 10^{-7} \text{ m}$.

Determine the luminosity of Aldebaran.

radius of Aldebaran = $3.14 \times 10^{10} \text{ m}$

Luminosity =

(Total for Question 13 = 4 marks)