8 Two stars, P and Q, have approximately the same radius. The surface temperature of star P is twice the surface temperature of star Q.

Star P has a luminosity L_P and star Q has a luminosity L_Q.

The ratio $\dfrac{L_P}{L_Q}$ is approximately

☒ **A** 2

☒ **B** 4

☒ **C** 8

☒ **D** 16

(Total for Question 8 = 1 mark)