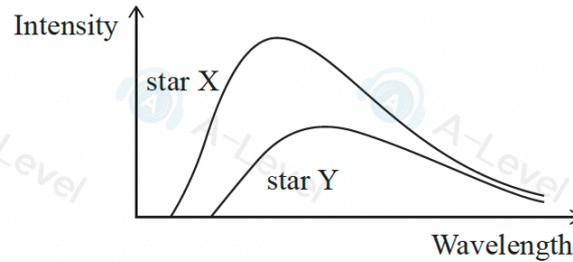**9** The graphs show how the radiation intensity varies with wavelength for star X and star Y. The surface temperature of star X is T_X and the surface temperature of star Y is T_Y.


Which of the following statements is correct?

☒ **A** $T_Y > T_X$ because the peak intensity for star Y is at the lower frequency.

☒ **B** $T_Y > T_X$ because the peak intensity for star Y is at the higher frequency.

☒ **C** $T_X > T_Y$ because the peak intensity for star X is at the lower frequency.

☒ **D** $T_X > T_Y$ because the peak intensity for star X is at the higher frequency.

(Total for Question 9 = 1 mark)

3 The graph shows how intensity of radiation varies with wavelength for two stars, P and Q.
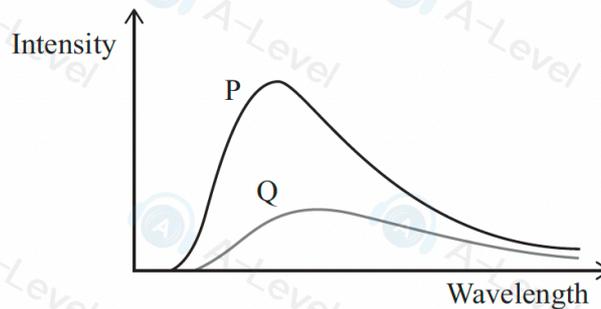
Which of the following could be deduced from the graph?

☐ **A** Luminosity of P > Luminosity of Q

☐ **B** Mass of P > Mass of Q

☐ **C** Radius of P > Radius of Q

☐ **D** Temperature of P > Temperature of Q

(Total for Question 3 = 1 mark)