Answer on Question 68419, Physics, Other

Question:

A substance is heated from 15°C to 35°C. What would the same incremental change be when registered in kelvins?

a) 20

b) 40

c) 36

d) 313

Solution:

Let's convert Celsius to Kelvin:

$$T_{initial\ (K)} = T_{initial\ (℃)} + 273.15 = 15℃ + 273.15 = 288.15\ K.$$

$$T_{final\ (K)} = T_{final\ (℃)} + 273.15 = 35℃ + 273.15 = 308.15\ K.$$

Finally, we can calculate the incremental change in temperature registered in kelvins:

$$\Delta T = T_{final\ (K)} - T_{initial\ (K)} = 308.15\ K - 288.15\ K = 20\ K.$$

Answer:

a) 20