

1 | cooling pizza

Compute

$$\int_0^5 -110e^{-0.4t} dt$$

to the nearest degree.

$$\int -110e^{-0.4t} dt = \frac{-110}{-0.4} e^{-0.4t} = 275e^{-0.4t}$$

Using the net change theorem,

$$\begin{aligned} \int_0^5 -110e^{-0.4t} dt &= \int -110e^{-0.4(5)} dt - \int -110e^{-0.4(0)} dt \\ &= 275e^{-0.4(5)} - 275e^0 \end{aligned}$$