

12 | estimate area

Right handed Riemann Sum:

$$0.5 + 4 + 10 + 13 + 10 + 0 = 37.5$$

13 | estimate area again

$$4(200 + 2700 + 1100 + 4000 + 200) = 32800$$

14 | area between curves

$$\begin{aligned} \int_0^{10} 2200e^{0.024t} dx - \int_0^{10} 1360e^{0.018t} dx &= \frac{1}{0.024} 2200e^{0.024t} - \frac{1}{0.018} 1360e^{0.018t} \\ \Rightarrow \frac{1}{0.024} 2200e^{0.24} - \frac{1}{0.018} 1360e^{0.18} - \frac{1}{0.024} 2200 + \frac{1}{0.018} 1360 &\approx 9964 \end{aligned}$$