$$60 \cdot 10^{-3} = 200a + (200)^2 b$$

$$= 200a + 40000b$$

$$\hookrightarrow a = \frac{60 \cdot 10^{-3} - 40000b}{200}$$

$$= 3 \cdot 10^{-4} - 200b$$

$$40 \cdot 10^{-3} = 400a + 160000b$$

$$= 1200 \cdot 10^{-4} - 400 \cdot 200b + 160000b$$

$$\hookrightarrow -80 \cdot 10^{-3} = 80000b$$

$$b = \frac{-80 \cdot 10^{-3}}{80 \cdot 10^{3}} = -1 \cdot 10^{-6}$$

$$a = 3 \cdot 10^{-4} + 200 \cdot 10^{-6}$$

$$= 5 \cdot 10^{-4}$$

$$\mathcal{E} = 30 \cdot 10^{-3} V \rightarrow 30 \cdot 10^{-3} = 5 \cdot 10^{-4} T - 10^{-6} T^2$$

$$3 = 5 \cdot 10^{-2} T - 10^{-4} T^2$$

$$10^{-4} T^2 - 5 \cdot 10^{-2} T + 3 = 0$$

$$D = 25 \cdot 10^{-4} - 4 \cdot 10^{-4} \cdot 3 = 13 \cdot 10^{-4}$$

$$T = \frac{5 \cdot 10^{-2} \pm \sqrt{13 \cdot 10^{-4}}}{2 \cdot 10^{-4}} = 430{,}3 \, °C \text{ or } 69{,}7 \, °C$$

emf $\downarrow$ as $T \uparrow$, so $T = 430{,}3 \, °C$