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$$(1) 0^\circ \Rightarrow 10^\circ \Rightarrow 20^\circ \Rightarrow 24.9^\circ$$

$$0_s = 10^\circ C$$

$$50 \text{ min} \Rightarrow 300 \text{ s} = 20^\circ C$$

$$\text{from } 10^\circ C \rightarrow 20^\circ C$$

↳ 5 minutes

for every 5 minutes it moves by $10^\circ C$

$$\therefore 10^\circ C = 300 \text{ s}$$

$$1^\circ C = \frac{300}{10} = 30 \text{ s}$$

So from $24.9^\circ C \rightarrow 20^\circ C$ ($20^\circ C \rightarrow 24.9^\circ C$)

It is additional $4.9^\circ C$

$$4.9 \times 30 \text{ s} = 147 \text{ s}$$

$$\therefore \frac{147}{60} = 2.45 \text{ minutes}$$

$$\therefore 5 \text{ minutes} + 2.45 \text{ minutes}$$

$$= 7.45 \text{ minutes}$$