

§ 1.5.2

問題A

$$\text{[1] (1) } \frac{dv}{dt} = 0 \quad \int dv = \int 0 dt$$
$$v = C \text{ (初値)} = 3$$

$$(2) \frac{dv}{dt} = 2 \quad \int dv = \int 2 dt$$
$$v = 2t + C \quad \text{初値 } 3 = C \quad \therefore v = 2t + 3$$

$$\text{[2] (1) } \frac{dv}{dt} = 0 \quad v = C = 8$$
$$x = \int 8 dt = 8t + C \quad \text{初値 } 3 = C \quad \therefore x = 8t + 3$$

$$(2) \frac{dv}{dt} = 9.8 \quad v = 9.8t + C \quad \text{初値 } 8 = C \quad \therefore v = 9.8t + 8$$
$$x = \int (9.8t + 8) dt = 4.9t^2 + 8t + C$$
$$\text{初値 } 3 = C \quad \therefore x = 4.9t^2 + 8t + 3$$