

2.5 媒介变数表示法微分

习题 B

$$(1) \frac{dy}{dx} = \frac{dy/dt}{dx/dt} = \frac{2t}{3t^2} = \frac{2}{3t}$$

$$(2) \frac{dy}{dx} = \frac{dy/dt}{dx/dt} = \frac{3-10t}{2}$$

$$(3) \frac{dy}{dx} = \frac{dy/dt}{dx/dt} = \frac{4}{2} = 2$$

$$(4) \frac{dy}{dx} = \frac{dy/dt}{dx/dt} = \frac{6t(1+t^3) - 3t^2 \cdot 3t^2}{3(1+t^3) - 3t \cdot 3t^2} = \frac{6t + 6t^4 - 9t^4}{3 + 3t^3 - 9t^3} = \frac{6t - 3t^4}{3 - 6t^3} = \frac{2t - t^4}{1 - 2t^3}$$