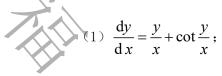
习题 7.3

1. 求下列微分方程的通解:



(2)
$$2xydx - (x^2 + y^2)dy = 0$$
;



(3)
$$x\frac{dy}{dx} + 2\sqrt{xy} = y \qquad (x < 0);$$

(4)
$$(1+2e^{\frac{x}{y}})dx + 2e^{\frac{x}{y}}(1-\frac{x}{y})dy = 0.$$

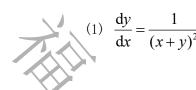


2. 求微分方程 $\frac{dy}{dx} = \frac{x}{y} + \frac{y}{x}$ 满足初值条件 $y|_{x=1} = 2$ 的特解:





3. 作适当的变量变化求下列微分方程的通解:



$$(2) \quad \frac{dy}{dx} = \frac{y - x - 2}{x + y + 4};$$









