

Integration by separation

Solve the Initial Value Problem

1. $\frac{dy}{dx} = \frac{x}{y}$ $y(1)=4$

2. $\frac{dy}{dx} = \frac{\sqrt{x}}{2y}$ $y(0)=2$

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

6. $\frac{dy}{dx} = 2x^2y^2$ $y(0)=-3$