(9) $\sin^3 x \cos x = y$

Use product rule

$$\frac{dy}{dx} = -\sin x \cdot \sin^3 x + \cos x \times 3 \times \sin^2 x \cdot \cos x$$

$$= -\sin^4 x + 3 \sin^2 x \cdot \cos^2 x$$

$$\boxed{\frac{dy}{dx} = -\sin^4 x + \frac{3}{4}(\sin 2x)^2}$$

$$\frac{d^2y}{dx^2} = -4\sin^3 x \cdot \cos x + \frac{3}{4} \times 2 \sin 2x \times \cos 2x \times 2$$

$$\boxed{\frac{d^2y}{dx^2} = -4\sin^3 x \cdot \cos x + 3 \sin 2x \cdot \cos 2x}$$