1. Find y′ of $x^3 + y^3 = 18xy$.

2. Find y′ and y′′ of $y^2 = 1 - 2x^2$. Simplify completely.

3. Find $\dfrac{d^2 y}{dx^2}$ of $x^2 + y^2 = 6$. Simplify completely.

4. Find dy/dx of each:

a) $y = \sin^{-1}(4x^2 + 3)$

b) $y = 4x + \cot^{-1}(16\sqrt{x})$

5. Find the equations of the tangent and normal lines of $y = \sec^{-1}(2x)$ at x = 1.