1. Find the derivative of \( y = (3x + 2\sin(5x^2))^7 \).

2. §3.5, p.162, #18: Find the derivative of \( h(t) = (t^4 - 1)^3(t^3 + 1)^4 \) and simplify.

3. §3.6, p.183, #66: If the equation of motion of a particle is given by \( s = A\cos(\omega t + \delta) \), the particle is said to undergo simple harmonic motion.
   (a) Find the velocity of the particle at time \( t \).
   (b) When is the velocity 0?

4. §3.6, p.169, #22: If \( g(x) + x\sin(g(x)) = x^2 \) and \( g(1) = 0 \), find \( g'(1) \).

5. §3.6, p.169, #26: Use implicit differentiation to find an equation of the tangent line to the curve \( x^2 + 2xy - y^2 + x = 2 \) at the point \((1, 2)\).