1. Find dy/dx if $y = \arcsin(3x)$.

2. Find dy/dx if $y = \arctan\left(\sqrt{4 - x^2}\right)$.

3. A 12-foot ladder is leaning against a wall. Let x denote the distance of the base of the ladder from the wall, and let θ be the angle between the ladder and the wall. How fast does the angle θ change with respect to x?

4. I compute that $d\theta/dx \approx 0.1$ when $x = 7$. What does this mean in language your parents can understand? Feel free to express your answer in terms of degrees instead of radians.