1. Complete the square of \( f(x) = 4x^2 - 8x + 1 \).

2. Prove that \( \frac{\sin(x + h) - \sin x}{h} = \sin x \left( \frac{\cos h - 1}{h} \right) + \cos x \left( \frac{\sin h}{h} \right) \) \( h \neq 0 \).

3. Find \( A \) and \( \delta \) such that \( \alpha \sin(\omega x) - \beta \cos(\omega x) = A \sin(\omega x + \delta) \), then use this result to solve \( \sin x - \cos x = \frac{1}{3} \).

4. P.76, §2.2, #20: Guess the value of the limit of the function to within 6 decimal places by evaluating the function at values of \( x \) to the left and right of 16

\[
\lim_{x \to 16} \frac{\sqrt{x} - 4}{x - 16}
\]

5. Find the equation of the tangent line to the curve \( y = 3x^2 \) at the point (5, 75).