```
def synthetic_division(coeffs, x0, iterations):
    n = len(coeffs) - 1
    x = x0

    for i in range(iterations):
        b = [coeffs[0]]
        for j in range(1, n + 1):
            b.append(coeffs[j] + x * b[j - 1])

        c = [b[0]]
        for j in range(1, n):
            c.append(b[j] + x * c[j - 1])

        x_new = x - (b[-1] / c[-1])
        print(f"Iteration {i + 1}: Root approximation = {x_new:.6f}")
        x = x_new

    return x

# Example usage
coefficients = [1, 1, 5, 4, 4]  # Represents polynomial x^4 + x^3 + 5x^2 + 4x + 4
initial_guess = float(input("Enter initial root approximation: "))
num_iterations = int(input("Enter number of iterations: "))

root = synthetic_division(coefficients, initial_guess, num_iterations)
print(f"Estimated root: {root:.6f}")
```