1. Find the zeros of the polynomial

\[ P(x) = x^4 - 6x^3 + 18x^2 - 30x + 25 \]

given that the sum of two of them is 4.

2. Solve the system of equations

\[ x + y + z = 1 \]
\[ xyz = 1, \]

given that \( x, y, z \) are complex numbers of absolute value equal to 1.

3. Find all polynomials whose coefficients are equal to either 1 or \(-1\) and whose zeros are all real.

4. The zeros of the polynomial \( P(x) = x^3 - 10x + 11 \) are \( u, v, \) and \( w \). Determine the value of \( \arctan(u) + \arctan(v) + \arctan(w) \).

5. Find all polynomials \( P(x) \) with integer coefficients satisfying \( P(P'(x)) = P'(P(x)) \).