(W1) How many solutions does the equation \( a + b + c + d + e = 2016 \) have, if...

(a) \( a, b, c, d, e \) are all positive integers?

(b) \( a, b, c, d, e \) are all non-negative integers?

(c) \( a, b, c, d, e \) are all integers \( \geq 10 \)? (Hint: let \( A = a - 9 \), \( B = b - 9 \), etc.)

(d) \( a, b, c, d, e \) are all even nonnegative integers?

(e) \( a, b, c, d, e \) are all integers (possibly negative) less than or equal to 2000? (Hint: here, \( a \leq 2000 \). Find a transformed variable \( A \geq 1 \) to set up stars-n-bars.)
(W2) Recall that a *quadratic polynomial* in the variable $x$ is an expression of the form $ax^2 + bx + c$. A *cubic polynomial* has degree three instead of two.

(a) What is the form of an arbitrary cubic polynomial in $x$? If your polynomial is called $g(x)$, evaluate $g(0)$, $g(1)$, $g(-1)$, and $g(2)$ in terms of the coefficients you used in your expression.

(b) How many cubic polynomials $f(x)$ with positive integer coefficients satisfy $f(1) = 9$?

(c) How many degree 6 polynomials $f(x)$ with positive integer coefficients satisfy $f(1) = 30$ and $f(-1) = 12$?