

Bronx Community College, CUNY

MTH30 Pre - Calculus

**Quiz 10**  
**(Section 2.5)**

Name: \_\_\_\_\_

1. List all the possible zeros of the polynomial function  $f(x) = 2x^5 + 7x^4 - 6x^3 + 5x^2 + 3x - 3$

2. Use ***Descartes's rule of signs*** to determine the possible number of *positive and negative real zeros* of the polynomial function  $f(x) = 2x^5 + 7x^4 - 6x^3 + 5x^2 + 3x - 3$

OVER



3. We are looking for a 3<sup>rd</sup> degree polynomial function with real coefficients satisfying the following conditions:

-3 and  $2+i$  are zeros and  $f(1) = -8$

(a) Which linear factorization would you use to find the equation (circle the answer)?

- $f(x) = a_n(x-3)(x-2-i)$
- $f(x) = a_n(x-3)(x-2-i)(x-2+i)$
- $f(x) = a_n(x-3)(x-2+i)$
- $f(x) = a_n(x+3)(x+2+2)(x+2-i)$

(b) What would you do next (circle the answer)?

- I will open all the parentheses (keeping  $a_n$  outside) and will write what I got as the answer
- After I open all the parentheses (keeping  $a_n$  outside) I would use  $f(1) = -8$  to find  $a_n$
- I have no clue!