

Name: _____
PC: _____

Date: _____
Ms. Loughran

Do Now:

1. Determine all the factors of $x^3 - 4x^2 - 11x + 30$ given that $x - 2$ is a factor.
2. Find a polynomial function of degree 4 that has integer coefficients and zeros $1, -1, 2, \frac{1}{2}$.
3. Use the remainder theorem to determine if $x + 2$ is a factor of $p(x) = x^5 + 2x^4 - 3x^3 - 6x^2 - 6x - 12$. Justify your answer.
4. If $p(x) = 2x^3 + cx^2 - 5x - 6$ and $x + 2$ is a factor of $p(x)$, find the value of c .