

E-Bulletin

Colegio Bilingüe New Horizons

PAP Pre-Calculus 11th grade
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Contents:

Functions and their graphs. Summary: Graph the linear, quadratic, cubic, square root.

The linear function (review). Special functions (step function, absolute value function). Graphics.

Analysis of a function.

Properties: Domain, range, symmetry, parity, monotony, intervals of positivity and negativity.

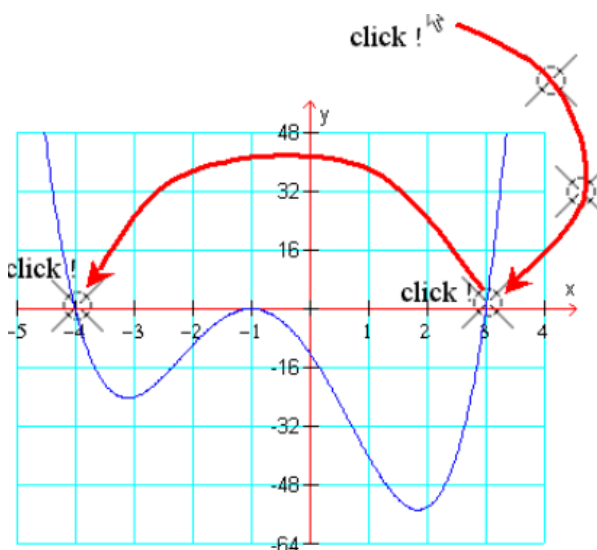
Transformations on the graph of a function:
Translations in the plane.

Inverse function.

Mathematical modeling.

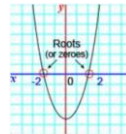
Finding zeros of polynomial functions:

The Intermediate Value Theorem, the Descartes' Rule of Signs, the Rational Zero Test, the fundamental theorem of Algebra.



math

Students will be able to:



- Perform operations on functions (including combination),
- Compose new functions from existing functions
- Define and find inverse functions, their domains and their ranges,
- Verify symbolically and graphically whether two given functions are inverses of each other,
- Predict the shape of the graph and its local and global behavior,
- Describe or graph notable features of a function using standard mathematical terminology and appropriate technology,
- Classify and perform translations, reflections, and dilations on functions,
- State and apply the Fundamental Theorem of Algebra.
- Apply theorems about the zeros of polynomial functions.
- Approximate zeros of polynomial functions.
- Relate graphical and analytical solutions of polynomial equations.

Recommended websites:

<http://math.dartmouth.edu>

<http://people.hofstra.edu>

<http://www.sosmath.com>