8TH GRADE MATH: ALGEBRA 1

West Valley Christian School's Algebra 1 students have impressively flexed their brain muscles through a unit on polynomials. They've learned how to factor polynomials in four different ways: with a traditional factoring method using the greatest common factor, by finding the difference of squares, by "slip and sliding," and by grouping. Towards the end of the unit, students produced a brochure that displays each of the methods—a valuable reference for anyone wanting to learn about this topic. It took several weeks of steady-paced learning to master such a topic, and now they get to apply what they've learned in the study of quadratics!

A common question for higher-level math is, "How does this apply to real life?" Polynomials are used in numerous real-life applications across various fields, including engineering, physics, economics, computer science, and more. Here are some examples:

- Engineering: In structural engineering, polynomials are used to model the behavior of materials under stress and strain.
- Physics: Polynomials are used in optics to model the behavior of light waves.

- Economics: Economic models frequently use polynomial functions to represent supply and demand curves, cost functions, and utility functions.
- Computer Graphics: In computer graphics, polynomials are used to represent curves and surfaces in 3D modeling and animation.
- Finance: Polynomials are used in financial mathematics to model the growth of investments over time, such as in compound interest calculations.
- Biology: Polynomials are used to model growth curves in populations and the spread of diseases.

These are just a few examples, but they illustrate the wide range of applications of polynomials in real-life scenarios. Polynomials provide a versatile tool for modeling relationships, making predictions, and analyzing data across diverse fields of study.