1 Standards:

6 Analyze possible zeros for a polynomial function over the complex numbers by applying the Fundamental Theorem of Algebra, using a graph of the function, or factoring with algebraic identities.

2 Example

For hundreds of years, there was a class of polynomials for which we could not find solutions. Consider,

$$2x^2 + x + 1$$

3 Questions

1. $\sqrt{-1}$
2. $\sqrt{-100}$
3. $\sqrt{-49}$
4. $\sqrt{-4}$
5. $\sqrt{-36}$
6. $\sqrt{-121}$
7. $\sqrt{-25}$
8. $\sqrt{-64}$
9. $\sqrt{-50}$
10. $\sqrt{-8}$
11. $\sqrt{-27}$
12. $\sqrt{-19}$
13. $\sqrt{-27}$
14. $\sqrt{-15}$
15. $\sqrt{-90}$