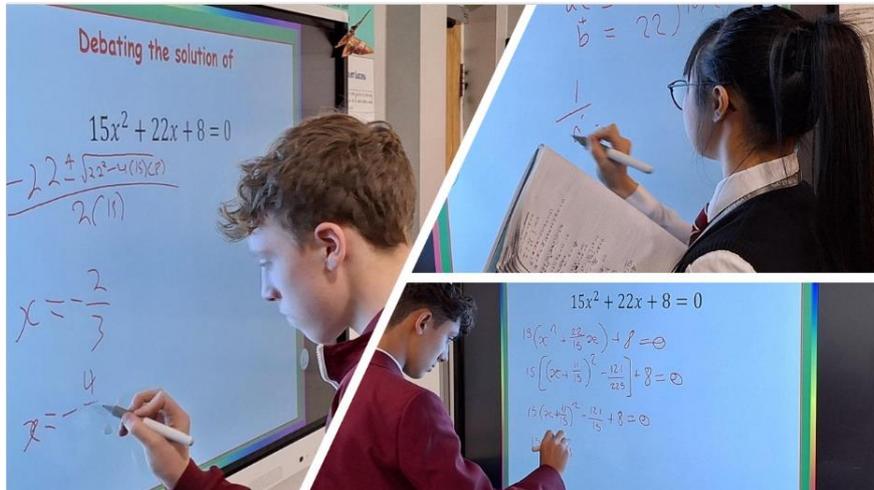


Debating the most effective approach to solve quadratic equations



Mathematics thrives on multiple methods and perspectives, as vividly demonstrated in a recent classroom debate. Three Lower 5 pupils, Jack, Ruby, and Joe, each solved the same quadratic equation, $15x^2 + 22x + 8 = 0$, using different methods: factorisation, completing the square, and the quadratic formula. Not only did they successfully solve the equation, but they also passionately defended their chosen approaches, offering valuable insights into their strengths and limitations.

Jack advocated for the *quadratic formula* for its speed and reliability. “It’s fast and saves a lot of pen ink!” he joked, highlighting its efficiency, particularly for quadratic equations that resist factorisation. He acknowledged that memorising the formula might be challenging for some, but a peer quickly pointed out that the formula is provided in exams, making it even more accessible.

Ruby preferred *factorisation*, describing it as the simplest and most error-proof method for quadratic expressions that can be factorised. She explained that it’s often the first method pupils learn, which makes it familiar and approachable. However, she admitted that factorisation isn’t always applicable and can be time-consuming, especially with complex coefficients.

Joe argued for *completing the square* because he finds the process easy to remember and enjoys using it. He acknowledged, however, that it can be time-consuming and challenging for those who haven’t fully mastered it. His argument underscored the importance of persistence and practice when tackling more intricate mathematical processes.

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The debate concluded that no single method is universally superior. Instead, the choice of approach depends on the context and the solver's preferences. Versatility, therefore, emerged as the most effective strategy of all.

Next time you encounter a quadratic equation, why not try all three methods yourself or ask your child to demonstrate them? You may discover a newfound appreciation for the beauty and flexibility of mathematics!

Mr Charles Adegboro