

Pre-Calculus 110

Graphing Quadratic Functions



Determining How Many x-Intercepts Assignment

Total value: 24

Your friend was absent from class on the day the teacher covered **finding the number of x-intercepts, without solving for them**. You've decided to help out by teaching the topic to your friend.

Prepare a mini lesson that explains the method of using the values of a and q in $y = a(x - p)^2 + q$ to determine whether a quadratic function has zero, one, or two x-intercepts. Make sure you only use examples of actual functions for each case and remember to include visuals with diagrams to help your friend understand the concepts.

(8 marks for explaining each case: 0, 1, and 2 x-intercepts)