



TEACHER PAGE

Lesson: Minimum and Maximum of a Graph
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New Arizona Math Standard 3 Patterns, Algebra and Functions Grades 9-12
Articulated 3MH2-06 Determine the solution to a contextual maximum/minimum problem, given the graphical representation.

Learning Objectives: The student will be able to:

- locate the vertex of a parabola in the form $y = ax^2 + bx + c$.
- determine a given vertex is a maximum or minimum
- explain the definitions of domain and range.

Entry skills:

This lesson works very well for students who have completed first year Algebra.

Overview:

Two semi-related topics are presented maximum and minimum with Domain and Range.

Engage students:

The teacher shows the flight of a hit baseball and asks: "Will it hit the roof?" Given the equation of the path of the ball. There were definitions given along with examples and practice using Domain and Range.

Follow-up:

TALK ABOUT IT! Investigate the indoor major league ball parks that allow balls to be hit the highest and longest... DIG DEEPER use the given formula to draw the parabola of a hit baseball. SO WHAT! gives practical applications of the use of minimum and maximum with football, baseball and swimming.

Assessment:

Students will need to select the correct graphs that match the domain and Range.

