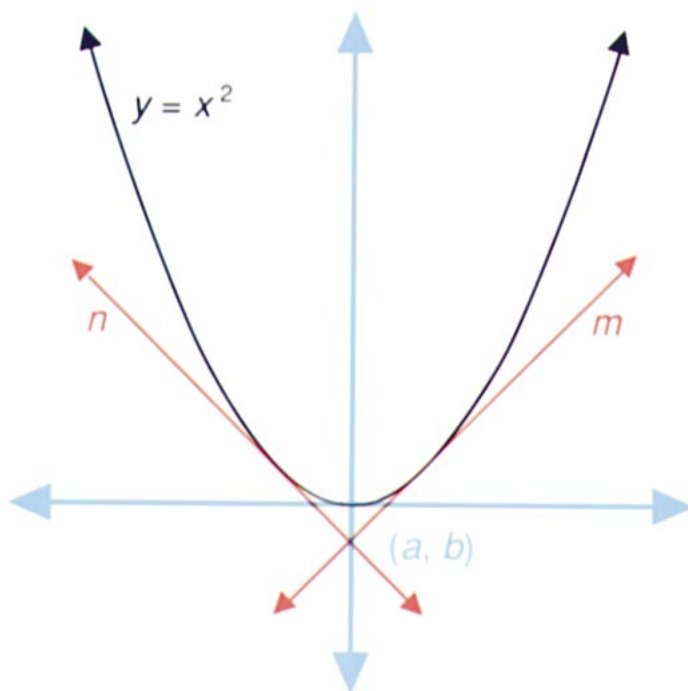


Tangents to a Parabola

Problem-of-the-Week

The Problem

The perpendicular lines n and m are tangent to the parabola $y = x^2$. Find the coordinates (a, b) where the two lines cross the y -axis.



Strategies and Hints

1. What are the slopes of lines n and m ?
2. Describe how to find the intersection of line m and the parabola.
3. What is true of the discriminant of a quadratic equation that has just one solution? What does this have to do with solving the problem?