

Problem of the Week-1: A Car Traveling on a Parabola

A car is traveling at night along a highway shaped like a parabola with its vertex at origin. The car starts at a point 100 m west and 100 m north of the origin and travels in an easterly direction. There is a statue located 100 m east and 50 m north of the origin. At what point on the highway will the car's headlights illuminate the statue?

As always, show your work, explain and justify your answer.

Posting Date 8/31/12. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 9/14/12.