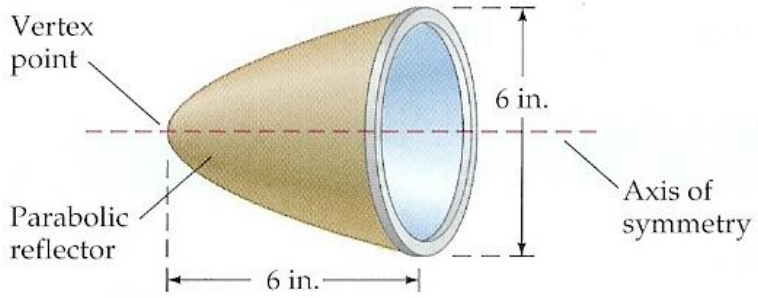
For help with these problems
www.tutor-homework.com
Be sure to mention the filename:
Physics_Questions_0009

www.tutor-homework.com (for tutoring, homework help, or help with online classes)

1) For an aircraft landing light, a light source is to be placed on the axis of symmetry of the parabolic reflector such as the one shown for Problem
5.1.44.

44. HEADLIGHT DESIGN A light source is to be placed on the axis of symmetry of the parabolic reflector shown in the figure below. How far to the right of the vertex point should the light source be located if the designer wishes the reflected light rays to form a beam of parallel rays?



The diameter and length of the design are 7.000 inches. How far to the right of the vertex point should the light source be located so that the reflected light rays form a beam of parallel rays? Give your answer to the nearest one thousandth of an inch.

2) Flying with the wind, a plane traveled 1,500 miles in 4 hours. Flying against the wind on the return trip, it took the plane 5 hours to fly the same distance. Find the speed of the plane in still air (the True Air Speed, TAS) and the speed of the wind. Give your answers to the nearest mile per hour (mph).

3) A right triange in the first quadrant is bounded by three lines. Find the area of the traingle. The equation of the lines are as follows.
x=0; y= (1/2)x; y= -2x + 7