There is a path up the hill from point A to point B. At point B one finds a beautiful (vertical) tree. This tree is 100 ft. tall. The path is inclined upward 10 degrees (above the horizontal), as shown. The line-of-sight angle at point A from the path (AB) to the top of the beautiful tree (AC) is 15 degrees, as shown. What is the length of the path, p, up the hill?

Show all your work. Arrange it neatly and in a logical order. When you calculate p, give the calculator approximation to seven decimal places, then round off to the nearest foot. Write your final answer in (good) sentence form.


