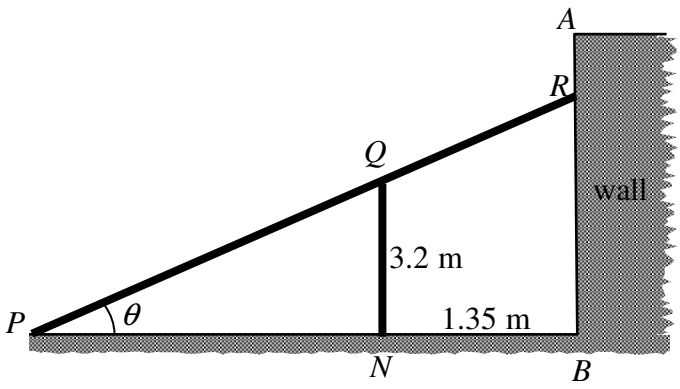
Question (*****)



The figure above shows the wall AB of a certain structure, which is supported by a straight rigid beam PR, where P is on level ground and R is at some point on the wall.

In order to increase the rigidity of the support, the beam is rested on a steady pole NQ, of height 3.2 metres.

The pole is placed at a distance of 1.35 metres from the bottom of the wall B.

The beam PR is forming an acute angle θ with the horizontal ground PNB.

The angle θ is chosen so that the length of the beam PR, is least.

Determine the least value for the length of the beam PR, assuming that R lies on the wall, fully justifying that this is indeed the minimum value.

$\boxed{6.25}$