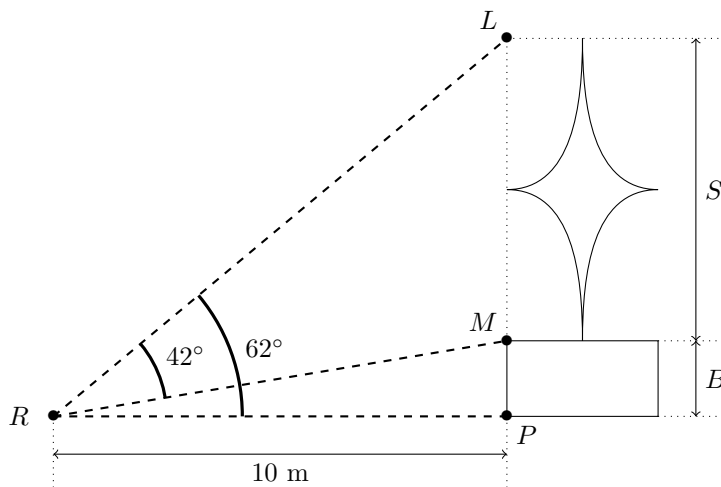**6**. [6 points] A sculpture of a star of height S (measured in meters) is mounted on a base of height B (measured in meters). Reina is standing at a distance of 10 meters away from the base of the statue, at the point R.

The measures of the angles LRM and LRP are 42° and 62° respectively. Note that **the diagram above is _not_ drawn to scale**. For this problem, you should **show your work**, and write your answers *in the spaces provided*.

a. [3 points] Write an expression for the height S of the star. Your answer may involve the constant B.

$S = $ _____

b. [3 points] Find the height B of the base of the statue. Your answer should not involve S.

$B = $ _____