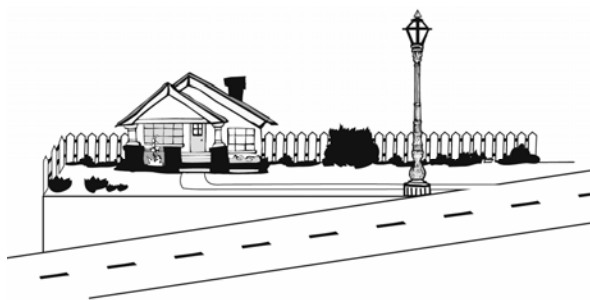


## 12. THE STREETLIGHT

Tom's street is on an incline.

Tom would like to know the height of the streetlight on the front of his property.

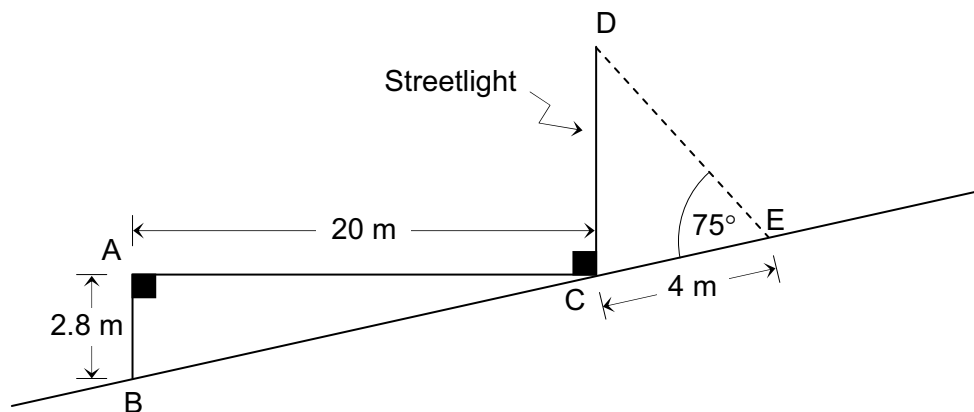


From the streetlight, Tom walks up his street for a distance of 4 m. From where he stops, the measure of the angle formed by the street and his line of vision relative to the top of the streetlight is  $75^\circ$ .

The diagram below shows a front view of Tom's property, the street and the streetlight. Various measurements are shown in this diagram.

In this diagram:

- line BE represents the street
- right triangle BAC represents the front of the property
- line segment CD represents the streetlight



To the nearest tenth of a metre, what is the height of the streetlight?