Li'l Larikkins Bushfire Safety

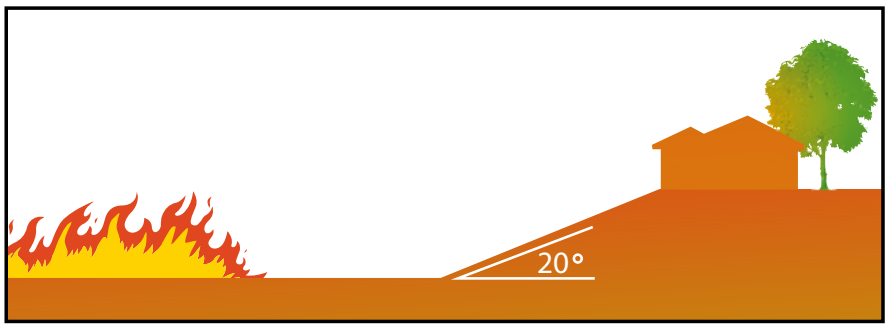
afac
Australasian Fire and Emergency Service Authorities Council

Fire Speed

Name: _____

The shape of the land (topography) has a big effect on the way a bushfire behaves. A fire burns faster uphill because the flames can reach more unburnt fuel in front of the fire. As a general rule a fire will travel four times faster up a hill with a 20° slope than it will along flat ground.

Using the information above and the picture below, answer the following questions:



1. How fast will the fire be travelling as it goes up the hill if:

a. it is travelling at 100 metres per hour along the flat ground?

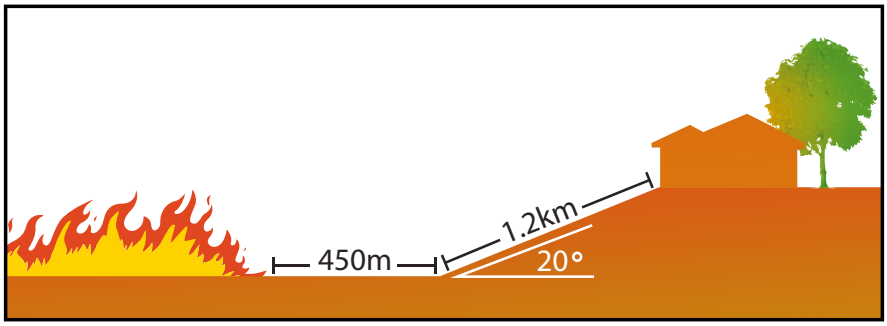
b. it is travelling at 400 metres per hour along the flat ground?

2. How fast was the fire travelling along the flat ground if:

a. it is now travelling uphill at 800 metres per hour?

b. if it is now travelling uphill at 100 metres per hour?

3. In the picture, the distance from the fire to the base of the hill is 450 metres. The distance from the base of the hill to the house is 1.2 kilometres. The fire is travelling at a speed of 150 metres per hour (along the flat ground). Using this information and remembering that the fire will travel four times faster uphill, calculate:



a. how long the fire will take to reach the house

b. what time the fire will reach the house if the fire started at 11am

Bushfire Safety

Solutions

Fire Speed Solutions

1. a. 400 metres per hour

b. 1600 metres per hour or 1.6 kilometres per hour

2. a. 200 metres per hour

b. 25 metres per hour

3. a. 5 hours

b. 4pm

Coordinate Drawing