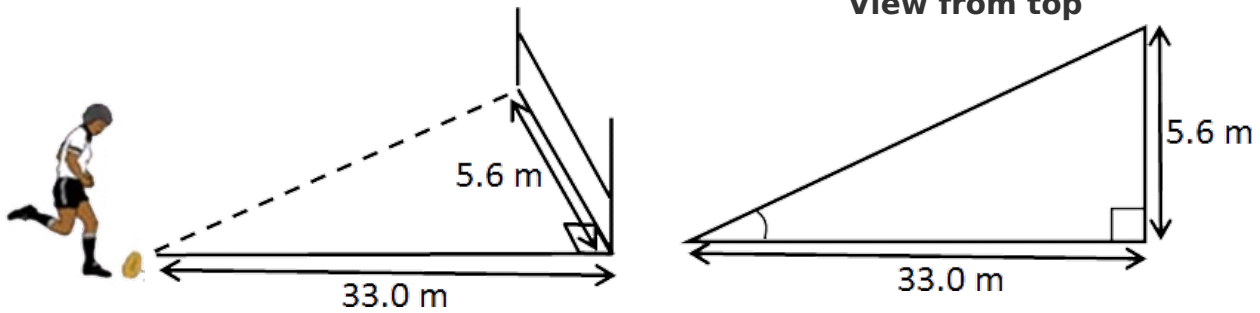


# Kicking for goal

This task is about using trigonometry to find missing lengths.

View from side

View from top



[Not drawn to scale]

Tiaki is about to kick for goal.

He is kicking from the right-hand side of the goal post from a distance of 33.0 metres, as shown in the diagrams above.

a) The distance between the two goal posts is 5.6 metres.

Calculate how far Tiaki is from the left-hand goal post. Show all your working in the box below.

Tiaki is \_\_\_\_\_ metres from the left-hand goal post.

b) Tiaki aims his kick directly at the right-hand goal post. The wind takes the ball  $10^\circ$  off course to the left.

i) Work out how far the ball passes to the left of the right-hand goal post. Show all your working in the box below.

The ball passes \_\_\_\_\_ metres from the left of the right-hand goal post.

ii) Does the ball pass between the goal posts? Yes / No (Circle one)

Explain your answer.

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