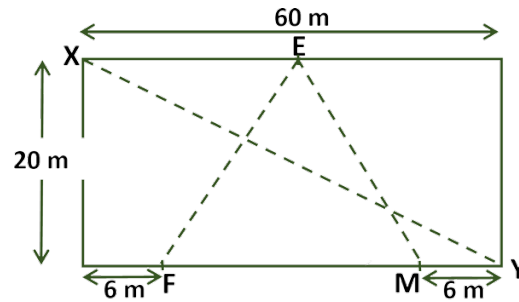


Tracking sports professionals

This task is about using the Pythagoras theorem to work out lengths of diagonals.



The Black Ferns are training using a rectangle that is 60 m long by 20 m wide.

- a) Ruby Tui crosses from point X to point Y.
Use Pythagoras' theorem to work out the length of the diagonal XY.
Show your working.

$XY = \underline{\hspace{2cm}} \text{ m}$

- b) She then crosses from point F to point E, and then to point M.
Point E is half way along the other side, and points F and M are 6 m in from each side.
Work out how far she travels between these points.
Show your working.

$FE + EM = \underline{\hspace{2cm}} \text{ m}$