

Challenge 290 : A Racing Riddle

Mo and Stef have challenged each other to race twice the length of the school hall.

The hall is rectangular with a platform at one end and doors at the opposite end.

Mo starts from the platform end and Stef from the end with the doors. They each run at a constant speed.

They first pass each other 30m from the platform end and then pass each other again 18m from the door end, as they return to their starting points.

What is the length of the school hall?

What is the ratio of Mo and Stef's speeds?

Find the most efficient method you can to answer these questions!