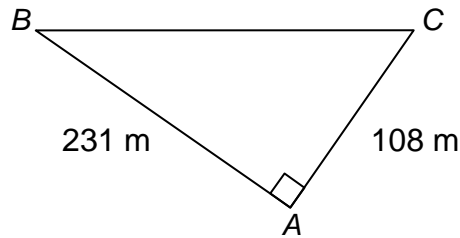


Spicy Question #35



The diagram above shows a course used for a 2-lap race.

Two runners both start at point A and then run 2 laps but in opposite directions to each other.

Runner 1 starts at A , runs to B , then to C , then back to A . They then repeat this for their second lap.
Runner 2 starts at A , runs to C , then to B , then back to A . They then repeat this for their second lap.

Runner 1 runs at a constant speed of 5 m/s
Runner 2 runs at a constant speed of 4 m/s

During the two laps the runners pass each other three times, at points D , E and F .

Find, in metres, the perimeter of triangle DEF .

Give your answer to 4 decimal places.



Calculator allowed

SUBMISSION DEADLINE 13/2/23 - 7PM

Video
Solution 



All submissions to be emailed to 1stclassmaths@gmail.com

Full terms and conditions: www.1stclassmaths.com/spicy-questions