

Spicy Question #33



NO Calculator

The curve C has equation $y = ax^2 + bx + c$

The roots of the equation $ax^2 + bx + c = 0$ are $x = 6$ and $x = 10$

The turning point of the graph of C has coordinates $(k, -12)$

The line L_1 has equation $y = -3x + 18$

L_1 intersects the curve C at the points $P = (x_1, y_1)$ and $Q = (x_2, y_2)$, where $x_1 < x_2$

Line L_2 is perpendicular to L_1 and also goes through the point P .

Line L_3 goes through the point Q and intersects line L_2 at the point R .

The area of triangle $PQR = 60$ units²

Find the equation of the line L_3

SUBMISSION DEADLINE 11/2/23 - 7PM

Video
Solution



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

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