

1. Nov/2023/Paper_0444/43/No.9

A is the point $(0, 2)$, B is the point $(3, 3)$, and C is the point $(4, 0)$.

- (a) Determine if triangle ABC is scalene, isosceles, or equilateral.
You must show all your working.

[4]

- (b) (i) Find the equation of the line AC .
Give your answer in the form $y = mx + b$.

$y = \dots\dots\dots$ [3]

- (ii) Find the equation of the perpendicular bisector of AC .
Give your answer in the form $y = mx + b$.

- (iii) $ABCD$ is a kite.
The point D has coordinates $(w, 4w + 1)$.

Find the coordinates of D .

(..... ,) [3]

