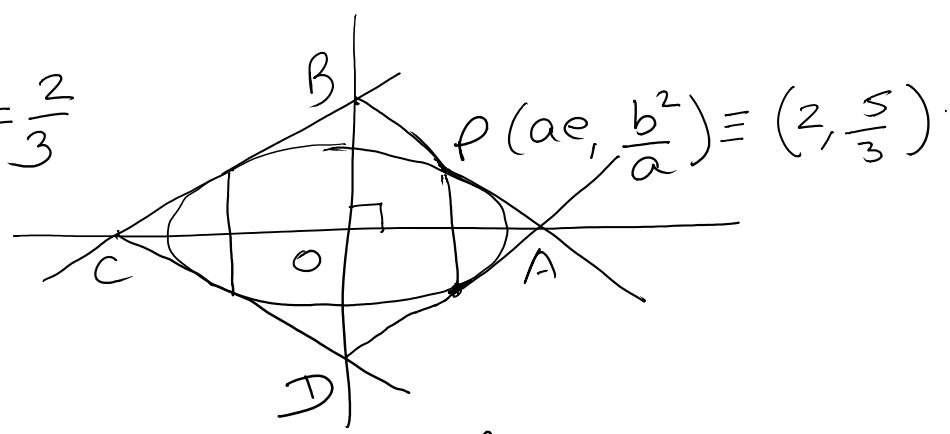The area (in sq. units) of the quadrilateral formed by the tangents at the end points of the latera recta to the ellipse $\frac{x^2}{9} + \frac{y^2}{5} = 1$, is :

(1) $\frac{27}{2}$

(2) 27

(3) $\frac{27}{4}$

(4) 18

$$e = \sqrt{1 - \frac{b^2}{a^2}} = \frac{2}{3}$$

$$P\left(ae, \frac{b^2}{a}\right) \equiv \left(2, \frac{5}{3}\right)$$

ABCD is a rhombus

$\therefore$ Area of ABCD $= 4 \times$ area of $\triangle AOB$

Equation of the tangent AB at point P is $\Rightarrow \frac{2x}{9} + \frac{y}{3} = 1$

$\therefore OA = \frac{9}{2}$; $OB = 3$

$\therefore$ Area of ABCD $= 4 \times \frac{1}{2} \times \frac{9}{2} \times 3$

$= 27$

Correct option is (2)