

- The area of the triangle formed by the line $\frac{x}{a} + \frac{y}{b} = 1$ with the coordinate axes is :
 - ab
 - $\frac{1}{2}ab$
 - $\frac{1}{4}ab$
 - $2ab$
- Jagdish has a field which is in the shape of a right angled triangle AQC. He wants to leave a space in the form of a square PQRS inside the field for growing wheat and remaining for growing vegetables as shown in figure. figure 1. In the field , there is a pole marked as O .

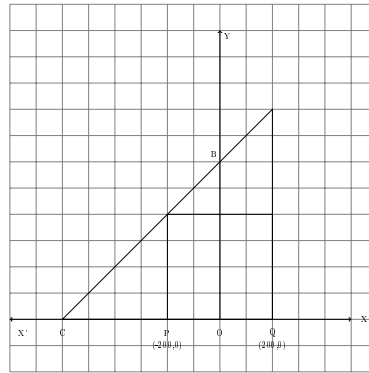


Figure 1: Image

Based on the above information, answer the following questions:

- (a) Taking O as origin, coordinates of P are $(-200,0)$ and of Q are $(200,0)$. PQRS being a square, what are the coordinates of R and S?
- (b)
 - i. What is the area of square PQRS?
 - ii. What is the length of diagonal PR in PQRS?
- (c) If S divides CA in the ratio $K:1$, what is the value of K, where point A is $(200,800)$?