1. The area of the triangle formed by the line $\frac{x}{a} + \frac{y}{b} = 1$ with the coordinate axes is :

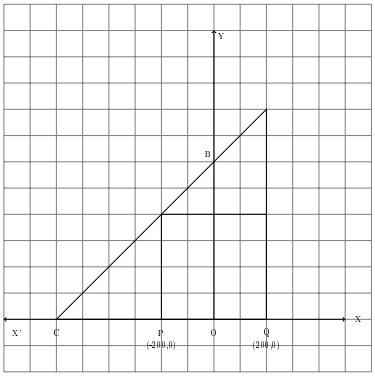
   (a) ab

   (b) $\frac{1}{2}ab$

   (c) $\frac{1}{4}ab$

   (d) $2ab$

2. 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 fiel d for growing wheat and remaining for growing vegetables as shown in figure. 1. In the field , there is a pole marked as O .



1

Figure 1: Image

Based on the above information,answer the following equations:

(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)?