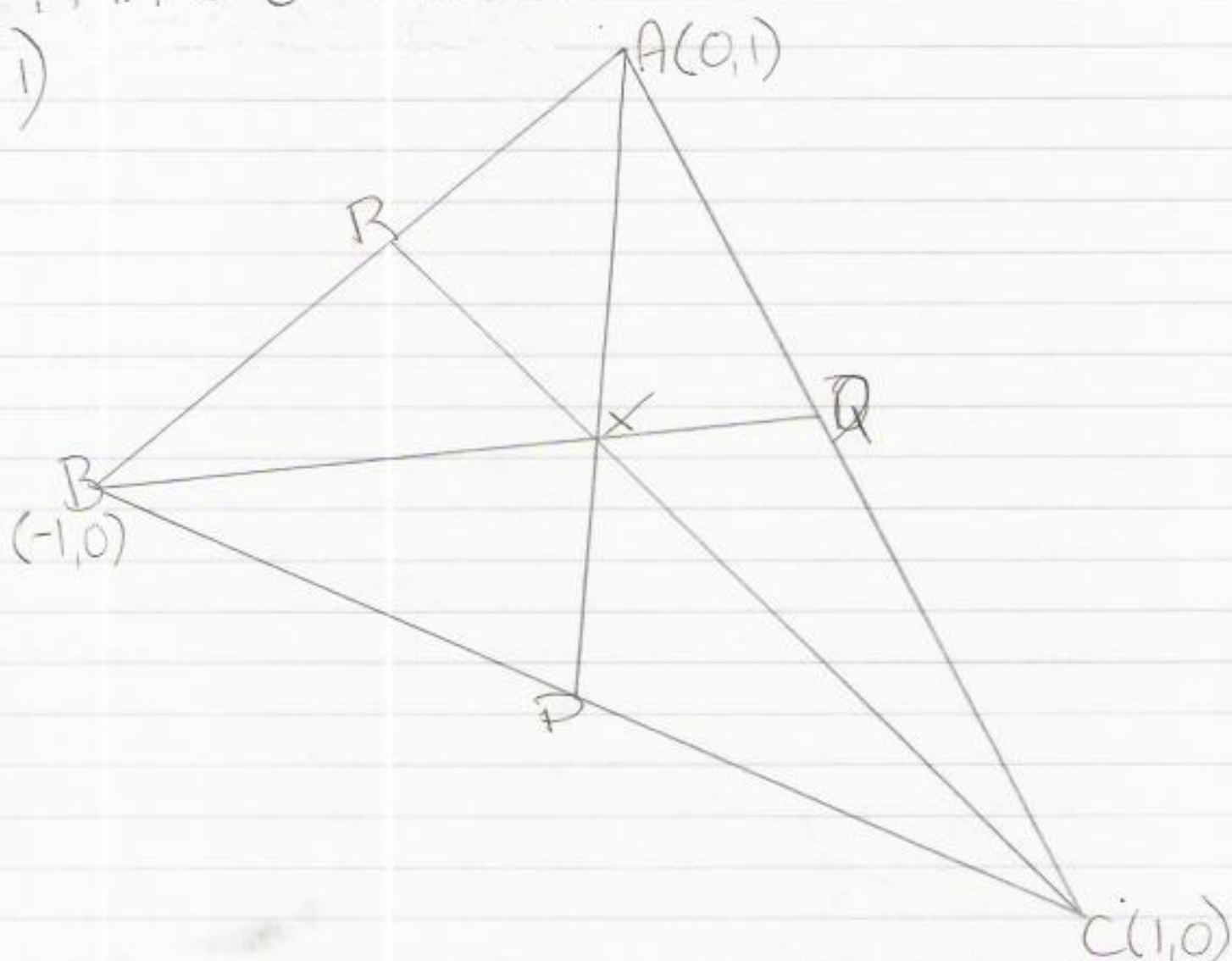


TMA 06 M203

1)



P is the midpoint of B(-1,0) and C(1,0)
The coordinates of P are given by
 $\frac{1}{2}((-1,0) + (1,0)) = (0,0)$
Q the midpoint of AC, A = (0,1), C = (1,0)
The coordinates of Q are given by
 $\frac{1}{2}((0,1) + (1,0)) = (\frac{1}{2}, \frac{1}{2})$

First (to find BX/XQ and AX/XP) find the equations of the lines BQ and AP respectively

BQ
Satisfies $y = mx + c$
 $0 = -m + c \Rightarrow m = c$
 $\frac{1}{2} = +m/2 + c$
 $1 = +m + 2c = 3c \Rightarrow c = \frac{1}{3}$ (since $m=c$)