

$$= -xpq - ypq + zpq = 0$$

$$= -x - y + z = 0.$$

On  $XY$ ,  $Z=0$  hence coordinates of A are  $(1, 1, 0)$

C)  $X'V$  has equation that is the solution of

$$\begin{vmatrix} x & y & z \\ a & 1 & 1 \\ q & 0 & q \end{vmatrix} = 0$$

$$\begin{vmatrix} x & y & z \\ a & 1 & 1 \\ q & 0 & q \end{vmatrix} = x \begin{vmatrix} 1 & 1 \\ 0 & q \end{vmatrix} - y \begin{vmatrix} a & 1 \\ q & q \end{vmatrix} + z \begin{vmatrix} a & 1 \\ q & 0 \end{vmatrix}$$

$$= xq - y(aq - q) + z(-q) = 0$$

$$= x - y(a-1) - z = 0.$$

$XW$  has equation that is solution of -

$$\begin{vmatrix} x & y & z \\ 1 & 0 & 0 \\ a & 1 & a \end{vmatrix} = 0$$

$$\begin{vmatrix} x & y & z \\ 1 & 0 & 0 \\ a & 1 & a \end{vmatrix} = x \begin{vmatrix} 0 & 0 \\ 1 & a \end{vmatrix} - y \begin{vmatrix} 1 & 0 \\ a & a \end{vmatrix} + z \begin{vmatrix} 1 & 0 \\ a & 1 \end{vmatrix}$$

$$= -ay + z = 0$$

We can find the coordinates of B by solving equations  $-ay + z = 0$ ,  $x + y(1-a) - z = 0$

Sub  $z = ay$  into  $x + y(1-a) - z = 0$

$$x + y(1-a) - ay = 0$$

$$x + y(1-2a) = 0$$

$$x = y(2a-1)$$

Hence coordinates of B are  $(2a-1, 1, a)$

To find coordinates of C

Find equation of  $X'V$