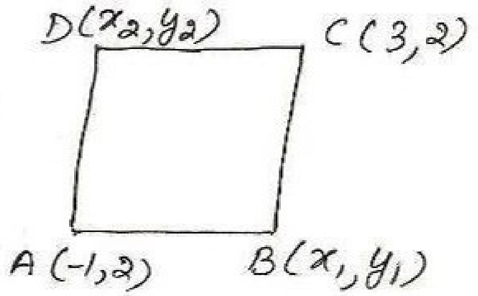
(4)



$AB = BC$ (Sides of Sq.)

$\Rightarrow AB^2 = BC^2$

$(x_1+1)^2 + \cancel{(y_1-2)^2} = (3-x_1)^2 + \cancel{(2-y_1)^2}$

$[\because (a-b)^2 = (b-a)^2]$

$\Rightarrow \cancel{x_1^2} + 1 + 2x_1 = 9 + \cancel{x_1^2} - 6x_1$

$\Rightarrow 8x_1 = 8$

$\Rightarrow x_1 = 1$

In rt $\triangle ABC$

$AC^2 = AB^2 + BC^2$ (Pythagoras theorem)

$(3+1)^2 + (2-2)^2 = (x_1+1)^2 + (y_1-2)^2 + (3-x_1)^2 + (2-y_1)^2$

$\Rightarrow 16 + 0 = (1+1)^2 + (y_1-2)^2 + (3-1)^2 + (2-y_1)^2$

$\Rightarrow 16 = 4 + y_1^2 + 4 - 4y_1 + 4 + 4 + y_1^2 - 4y_1$

$\Rightarrow \cancel{16} = \cancel{16} + 2y_1^2 - 8y_1$

$\Rightarrow 2y_1^2 - 8y_1 = 0$

$\Rightarrow 2y_1(y_1 - 4) = 0$

$\Rightarrow y_1 = 0,\ y_1 - 4 = 0$

$\Rightarrow y_1 = 4$

Midpoints of AC and BD coincide $\because$ diagonals bisect each other

$\frac{-1+3}{\cancel{2}} = \frac{x_2+1}{\cancel{2}}$

$\Rightarrow 2 = x_2 + 1$

$\Rightarrow x_2 = 1$

if $y_1 = 4$

$\frac{2+2}{\cancel{2}} = \frac{y_2+4}{\cancel{2}}$

$4 = y_2 + 4$

$\Rightarrow y_2 = 0$

if $y_1 = 0$

$\frac{2+2}{\cancel{2}} = \frac{y_2+0}{\cancel{2}}$

$\Rightarrow y_2 = 4$

coordinates are

B(1, 0), D(1, 4)

or

B(1, 4), D(1, 0)