Exercise 3B

Question 27:
$217x + 131y = 913$ ---(1)
$131x + 217y = 827$ ---(2)
Adding (1) and (2), we get
$348x + 348y = 1740$
$348(x + y) = 1740$
$x + y = 5$ ----(3)
Subtracting (2) from (1), we get
$86x - 86y = 86$
$86(x - y) = 86$
$x - y = 1$ ---(4)
Adding (3) and (4), we get
$2x = 6$
$x = 3$
putting $x = 3$ in (3), we get
$3 + y = 5$
$y = 5 - 3 = 2$
Hence solution is $x = 3, y = 2$

Question 28:
$41x - 17y = 99$ ---(1)
$17x - 41y = 75$ ---(2)
Adding (1) and (2), we get
$58x - 58y = 174$
$58(x - y) = 174$
$x - y = 3$ ---(3)
subtracting (2) from (1), we get
$24x + 24y = 24$
$24(x + y) = 24$
$x + y = 1$ ---(4)
Adding (3) and (4), we get
$2x = 4$ $x = 2$
Putting $x = 2$ in (3), we get
$2 - y = 3$
$-y = 3 - 2$ $y = -1$
Hence solution is $x = 2, y = -1$

********** END **********