



### Exercise 3B

Question 27:

$$217x + 131y = 913 \text{ ---(1)}$$

$$131x + 217y = 827 \text{ ---(2)}$$

Adding (1) and (2), we get

$$348x + 348y = 1740$$

$$348(x + y) = 1740$$

$$x + y = 5 \text{ ----(3)}$$

Subtracting (2) from (1), we get

$$86x - 86y = 86$$

$$86(x - y) = 86$$

$$x - y = 1 \text{ ---(4)}$$

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:

$$41x - 17y = 99 \text{ ---(1)}$$

$$17x - 41y = 75 \text{ ---(2)}$$

Adding (1) and (2), we get

$$58x - 58y = 174$$

$$58(x - y) = 174$$

$$x - y = 3 \text{ ---(3)}$$

subtracting (2) from (1), we get

$$24x + 24y = 24$$

$$24(x + y) = 24$$

$$x + y = 1 \text{ ---(4)}$$

Adding (3) and (4), we get

$$2x = 4 \quad x = 2$$

Putting  $x = 2$  in (3), we get

$$2 - y = 3$$

$$-y = 3 - 2 \quad y = -1$$

Hence solution is  $x = 2, y = -1$

\*\*\*\*\* END \*\*\*\*\*