The normal to the curve, $x^2+2xy-3y^2=0$, at (1, 1) :

(1) meets the curve again in the third quadrant.

(2) meets the curve again in the fourth quadrant.

(3) does not meet the curve again.

(4) meets the curve again in the second quadrant.

$x^2+2xy-3y^2=0$

Differentiating w.r.t x, we get

$y' = \frac{x+y}{3y-x}$ = Slope of the tangent

$\therefore$ Slope of the normal $= \frac{x-3y}{x+y}$

$\therefore$ Slope of the normal at $(1,1)$

$= -1$

$\therefore$ Equation of the normal with slope -1 and passing through the point $(1,1)$ is $\equiv y=-x+2$

This normal intersects the curve $x^2+2xy-3y^2=0$ again at $(3,-1)$ which lies in the 4th quadrant

$\therefore$ The correct option is (2)