Eq1: $y-3x=2$

Eq2: $y = (x+1)^2 - 5$

1) Solve Eq1 for y to get $y=2+3x$

2) Plug $2+3x$ into Eq2 to get $2+3x=(x+1)^2 - 5$

3) The equation in step 2) is now in only the variable x.

$2+3x=x^2 + 2x + 1 - 5$ expand

$2+3x=x^2 + 2x - 4$ simplify on the right

$0=x^2 + 2x - 4 - 2 - 3x$ move to the right side with subtraction

$0=x^2 - x - 6$ solve this with factoring

$(x-3)(x+2)=0$

$x=3$ or $x=-2$

4) When $x=3$, $y=2+3(3)=2+9=11$, so the point is $(3,11)$

5) When $x=-2$, $y=2+3(-2)=2-6=-4$, so thte point is $(-2,-4)$