① $x - 4y + 8 \geq 0$

$x \geq 4y + 8$

x	0	8
y	2	0

$2x^2 + 2y^2 + 12x - 4y + 13 > 0$

$x^2 + 6x + 9 - 9 + y^2 - 2y + 1 - 1 > -\frac{13}{2}$

$(x+3)^2 + (y-1)^2 > -\frac{13}{2} + \frac{20}{2}$

$(x+3)^2 + (y-1)^2 > \frac{7}{2}$

$C = (-3, 1)$

$r = \sqrt{\frac{7}{2}}$

② $x^2+y^2+6x-2y+1>0$

$x^2+6x+y^2-2y \geq -1$

$x^2+6x+9-9+y^2-2y+1-1 \geq -1$

$(x+3)^2+(y-1)^2 \geq 9$

$(a,b) = (-3, 1)$

$r = \sqrt{9} = 3$

$y \geq x^2+6x+8$

$y \geq (x+3)^2-9+8$

$y \geq (x+3)^2-1$

$(h,k) = (-3,-1)$

x	-3	-4	0
y	0	0	8

③ $y = 2x^2 + 12x + 17$

$y = 2(x^2 + 6x + 17/2)$

$y = 2[x^2 + 6x + 9 - 9 + 17/2]$

$y = 2[(x+3)^2 - 9 + 17/2]$

$y = 2(x+3)^2 - 18 + 17$

$y = 2(x+3)^2 - 1$

$(h, k) = (-3, -1)$

x	0	-6
y	17	17

$y = 2(0+3)^2 - 1$

$y = 2(9) - 1$

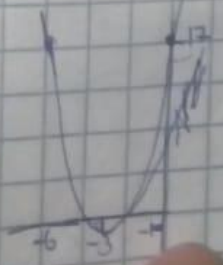
$y = 17$

$y = 2(-6+3)^2 - 1$

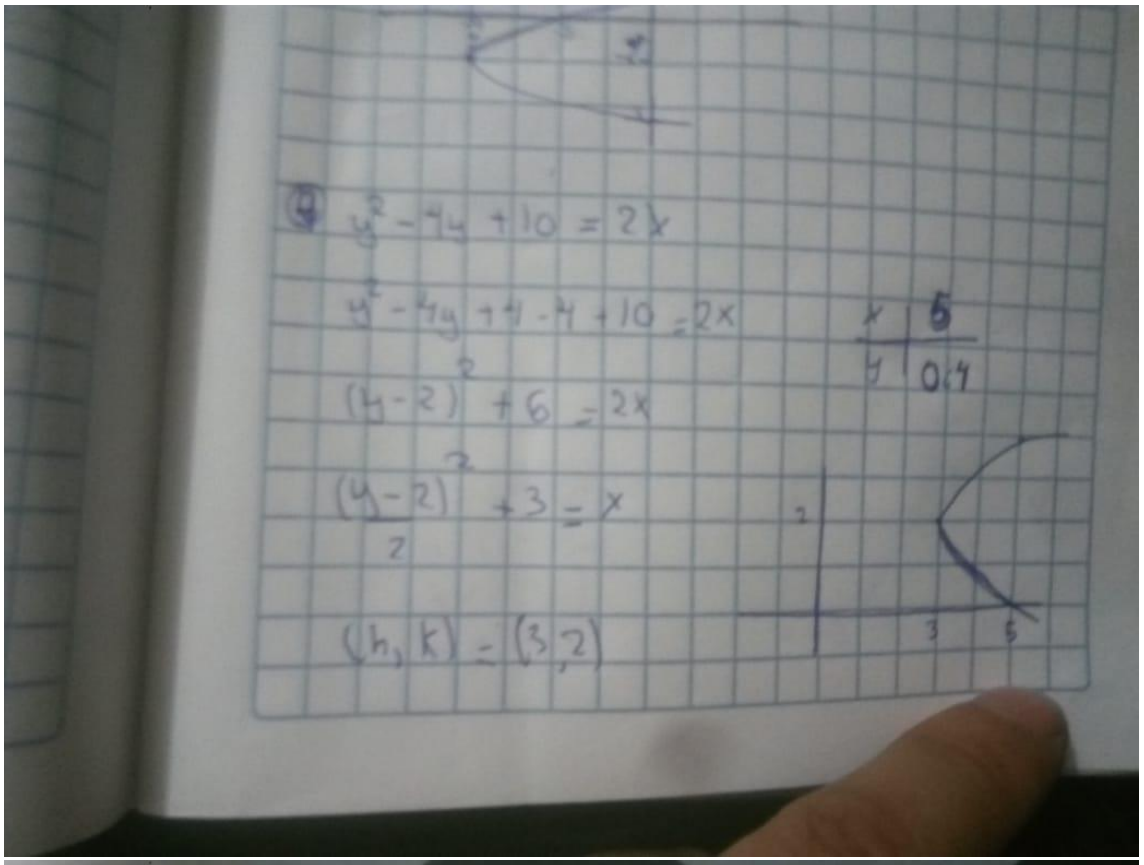
$y = 2(-3)^2 - 1$

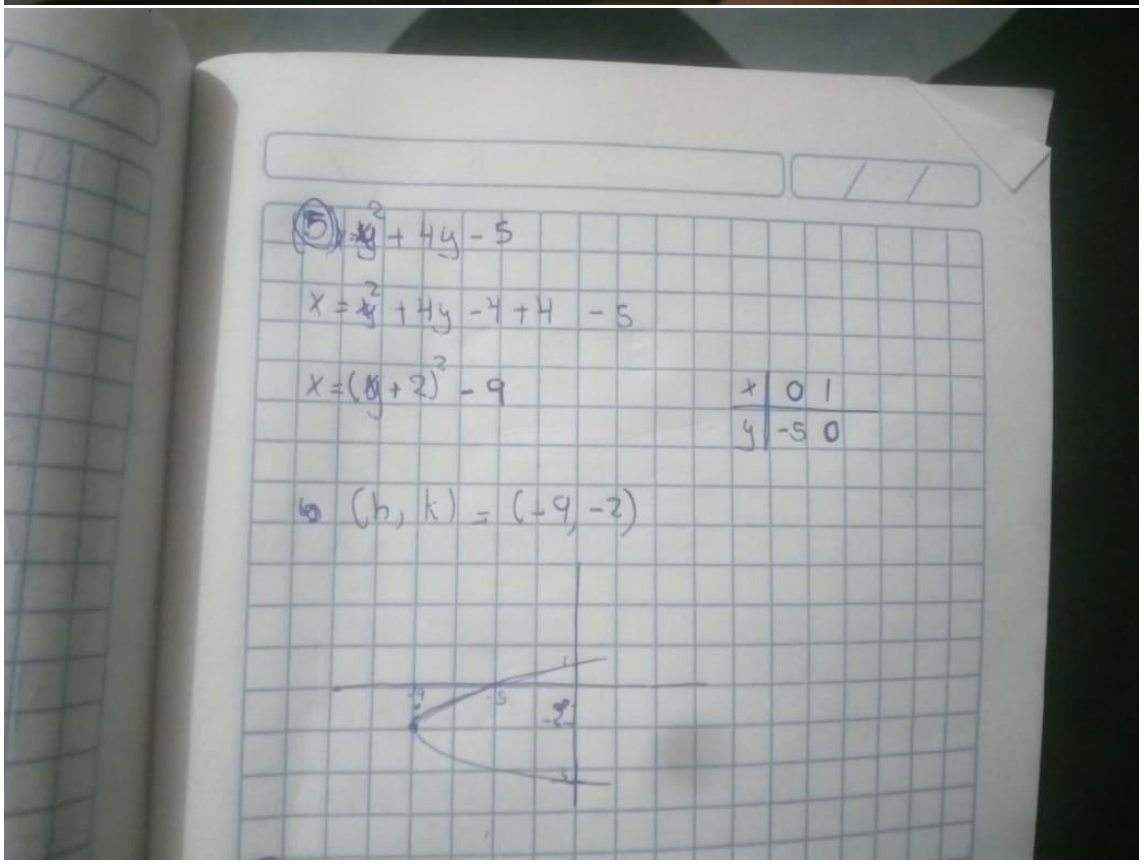
$y = 2(9) - 1$

$y = 17$



D


y² - 4y + 10 = 2x
y² - 4y + 4 - 4 + 10 = 2x
(y - 2)² + 6 = 2x
(y - 2)² / 2 + 3 = x
(h, k) = (3, 2)
x | 5
y | 0 4
2
3
5


y² + 4y - 5
x = y² + 4y - 4 + 4 - 5
x = (y + 2)² - 9
x | 0 1
y | -5 0
(h, k) = (-4, -2)