11. $y = 8n^2 + 16n + 79$

$y - 79 = 8n^2 + 16n$

$y - 79 = 8(n^2 + 2n)$

$y - 79 + 8 = 8(n^2 + 2n + 1)$

$y - 71 = 8(n+1)^2$

$y = 8(n+1)^2 + 71$

$V(-1, 71)$ (x, y)

$(x, y) \rightarrow (x - 1, 8y + 71)$

12. $y = v^2 - 10v + 9$

$y - 9 + 25 = v^2 - 10v + 25$

$y + 16 = (v-5)^2$

$y = (v-5)^2 - 16$

V: $(5, -16)$

SF: 1

up

$(x, y) \rightarrow (x+5, +1y-16)$

13. $y = x^2 + 8x + 74$

$+16$

$y - 74 = x^2 + 8x + 16$

$y - 58 = (x+4)^2$

$y = (x+4)^2 + 58$

x y

V $(-4, 58)$

SF : 1

up

$(x, y) \rightarrow (x-4, +1y+58)$

14. $y = 7x^2 + 14x - 21$

$y + 21 = 7x^2 + 14x$

$y + 21 = 7(x^2 + 2x)$

$y + 21 + 7 = 7(x^2 + 2x + 1)$

$y + 28 = 7(x+1)^2$

$y = 7(x+1)^2 - 28$

$(x, y) \rightarrow (x-1, 7y-28)$