

1

$y = 2x^2 + 3x + 5$

2	3	5	$5 - \frac{9}{8}$
	4	9	$= \frac{40}{8} - \frac{9}{8}$
		8	$= \frac{31}{8}$
2	$\frac{3}{4}$	$\frac{31}{8}$	

$$y = 2\left(x + \frac{3}{4}\right)^2 + \frac{31}{8}$$

①

$y = x^2 + 6x$

$$y = (x + 3)^2 - 9$$

②

$y = x^2 + 10x$

$$y = (x + 5)^2 - 25$$

③

$y = x^2 - 4x + 7$

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

④

$y = x^2 - 8x + 5$

$$y = (x - 4)^2 - 11$$

⑤

$y = x^2 + 3x + 2$

$$y = \left(x + \frac{3}{2}\right)^2 - \frac{1}{4}$$

2

$y = ax^2 + bx + c$

a	b	c	$c - \frac{b^2}{4a}$
	$2a$	b^2	$= \frac{4ac}{4a} - \frac{b^2}{4a}$
		$4a$	$= -\frac{b^2 - 4ac}{4a}$
			$= -\frac{D}{4a}$
a	$\frac{b}{2a}$		$-\frac{D}{4a}$

$$y = a\left(x + \frac{b}{2a}\right)^2 - \frac{b^2 - 4ac}{4a}$$

⑥

$y = 2x^2 + 8x + 7$

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

⑦

$y = 3x^2 - 18x - 2$

$$y = 3(x - 3)^2 - 29$$

⑧

$y = -x^2 - 10x + 5$

$$y = -(x + 5)^2 + 30$$

⑨

$y = -2x^2 + 12x - 7$

$$y = -2(x - 3)^2 + 11$$

⑩

$y = \frac{1}{2}x^2 - 3x + 1$

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