

pg 237 (18, 19) $y = ax^2 + bx + c$

(18)	$x y$		<u>Cancel c's</u>	<u>Cancel b's</u>	<u>Cancel a's</u>
	-1 6	① $1a - 1b + c = 6$	$2b = -2$	$2a + 2c = 10$	$2b = -2$
	1 4	② $1a + 1b + c = 4$	$3a + 3b = 3$	$6a + 3c = 21$	$6b - 3c = -15$
	2 9	③ $4a + 2b + c = 9$	$3a + 1b = 5$	$2a - 1c = 1$	$-2b - 3c = -7$

$a = 2 \quad b = -1 \quad c = 3 \rightarrow \boxed{y = 2x^2 - 1x + 3}$

(19)	$x y$		<u>Cancel c's</u>	<u>Cancel b's</u>	<u>Cancel a's</u>
	-1 -1	① $1a - 1b + c = -1$	$2b = 4$	$2a + 2c = 2$	$2b = 4$
	1 3	② $1a + 1b + c = 3$	$3a + 3b = 9$	$6a + 3c = 6$	$6b - 3c = 12$
	2 8	③ $4a + 2b + c = 8$	$3a + 1b = 5$	$2a - 1c = 2$	$-2b - 3c = -4$

$a = 1 \quad b = 2 \quad c = 0 \rightarrow \boxed{y = 1x^2 + 2x}$

pg 252 (19, 43, 45) $y = a(x-h)^2 + k$

(19) vertex $(-3, -2)$
point $(-2, 4)$

$$y = a(x-h)^2 + k$$

$$4 = a(-2 + 3)^2 - 2$$

$$4 = a(1)^2 - 2$$

$$4 = 1a - 2$$

$$6 = 1a$$

$$6 = a$$

$\boxed{y = 6(x+3)^2 - 2}$

(43) vertex $(1, 2)$
point $(2, -5)$

$$y = a(x-h)^2 + k$$

$$-5 = a(2-1)^2 + 2$$

$$-5 = a(1)^2 + 2$$

$$-5 = 1a + 2$$

$$-7 = 1a$$

$$-7 = a$$

$\boxed{y = -7(x-1)^2 + 2}$

(45) vertex $(-3, 6)$
point $(1, -2)$

$$y = a(x-h)^2 + k$$

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

$$-2 = a(4)^2 + 6$$

$$-2 = 16a + 6$$

$$-8 = 16a$$

$$-\frac{1}{2} = a$$

$\boxed{y = -\frac{1}{2}(x+3)^2 + 6}$