

2⑩  $34 + 32 + 30 + \dots + 10$

$$a = 34, d = 32 - 34 = -2$$

$$a_n = 10$$

$$a + (n-1)d = 10$$

$$34 + (n-1)(-2) = 10$$

$$\left(\frac{1}{2}\right)$$

$$17 - n + 1 = 10$$

$$\Rightarrow n = 13$$

$$S_{13} = \frac{13}{2} (34 + 10)$$

$$= \frac{13 \times 44}{2}$$

$$= 286$$

2⑪  $-5 + (-8) + (-11) + \dots + (-230)$

$$a = -5, d = -8 + 5 = -3$$

$$a_n = -230$$

$$a + (n-1)d = -230$$

$$-5 + (n-1)(-3) = -230$$

$$\Rightarrow -3(n-1) = -225$$

$$\Rightarrow n-1 = 75$$

$$\Rightarrow n = 76$$

$$S_{76} = \frac{76}{2} [-5 + (-230)]$$

$$= 38(-235)$$

$$= -8930$$

3⑩  $a = 5, d = 3, a_n = 50$

$$n = ?, S_n = ?$$

$$a_n = 50$$

$$a + (n-1)d = 50$$

$$5 + (n-1)3 = 50$$

$$\Rightarrow 3(n-1) = 45$$

$$\Rightarrow n-1 = 15$$

$$\Rightarrow n = 16$$

$$S_{16} = \frac{16}{2} [5 + 50]$$

$$= 8 \times 55$$

$$= 440$$

⑪  $a = 7, a_{13} = 35, d = ?, S_{13} = ?$

$$a_{13} = 35$$

$$a + 12d = 35$$

$$7 + 12d = 35$$

$$\Rightarrow 12d = 28$$

$$\Rightarrow d = \frac{28}{12} = \frac{7}{3}$$

$$\Rightarrow d = \frac{7}{3}$$

$$S_{13} = \frac{13}{2} (7 + 35)$$

$$= \frac{13 \times 42}{2}$$

$$= 273$$

⑫  $a_{12} = 37, d = 3, a = ?, S_{12} = ?$

$$a + 11d = 37$$

$$a + 11 \times 3 = 37$$

$$\Rightarrow a = 4$$

$$S_{12} = \frac{12}{2} [4 + 37]$$

$$= 6 \times 41$$

$$= 246$$