

4.14
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$$a_n = a_1 + S_{n-1}$$

$$a_n = 1 + [7 \cdot 2 + 7(n-2)] \frac{n-1}{2}$$

$$= 1 + \frac{7n^2 - 7n}{2} = \frac{7n^2 - 7n + 2}{2}$$

$$35351 = \frac{7n^2 - 7n + 2}{2}$$

$$70702 = 7n^2 - 7n + 2$$

$$70700 = 7n^2 - 7n \quad /:7$$

$$0 = n^2 - n - 10100$$

$$\boxed{n = 101}$$

$$\cancel{n = -100}$$