

2.75
k2

$$\begin{cases} S_{10} = 300 \\ a_2 = a_1 \cdot a_5 \end{cases} \rightarrow \begin{cases} 300 = \frac{10}{2} [2a_1 + 9d] \\ (a_1 + d)^2 = a_1(a_1 + 4d) \end{cases} \rightarrow \begin{cases} 60 = 2a_1 + 9d \\ a_1^2 + 2ad + d^2 = a_1^2 + 4da_1 \end{cases}$$

$$0 = d^2 - 2da_1 = d(d - 2a_1)$$

$$\begin{cases} d = 0 \\ a_1 = 30 \end{cases}$$

$$a_7 = 30$$

$$d = 2a_1$$

$$60 = 2a_1 + 18a_1 \rightarrow \boxed{a_1 = 3}$$

$$a_7 = 3 + 6 \cdot 6 = 39$$