276. Paint Fence

n Posts, k colors.

Example:

n=3, K=2
o/p: 6

	P_1	P_2	P_3
c1	1	2	3
c2	1	2	3

= 6

n=5, K=3
op: 180

	P_1	P_2	P_3	P_4	P_5
c1	1	3	6+2 =8	16+6 =22	44+16 60
c2	1	3	8	22	60
c3	1	3	8	22	60

=180

Recurrence Relation:

$$P_i \in \{ P_1, P_2, \ldots P_n \} \; ; \; c_j \in \{ c_1, c_2 \ldots c_k \}$$

$$N(P_i, c_j) = \begin{cases} 1 & ; \quad n == 1 \\[2mm] \sum_{x=1}^{K} N(P_1, c_x) & ; \quad n == 2 \\[4mm] \sum_{\substack{x=1 \\ x \neq j}}^{K} N(P_{i-1}, c_x) \; + \\ \qquad \sum_{\substack{x=1 \\ x \neq j}}^{K} N(P_{i-2}, c_x) & ; \quad \text{otherwise} \quad n > 2 \end{cases}$$