

Задача 1. Да се намери $\mathcal{P}\left(\{\emptyset\} \times \{\{\emptyset\}\}\right) \times \mathcal{P}(\emptyset)$.

Решение:

$$\underbrace{\{\emptyset\}}_a \times \underbrace{\{\{\emptyset\}\}}_b = \{a\} \times \{b\} = \{(a, b)\} = \underbrace{\{(\emptyset, \{\emptyset\})\}}_c.$$

$$\mathcal{P}(\{c\}) = \{\emptyset, \{c\}\} = \left\{ \emptyset, \{(\emptyset, \{\emptyset\})\} \right\}.$$

$$\mathcal{P}(\emptyset) = \{\emptyset\}.$$

$$\begin{aligned} \mathcal{P}(\{c\}) \times \mathcal{P}(\emptyset) &= \{\emptyset, \{c\}\} \times \{\emptyset\} = \{(\emptyset, \emptyset), (\{c\}, \emptyset)\} = \\ &= \left\{ (\emptyset, \emptyset), (\{(\emptyset, \{\emptyset\})\}, \emptyset) \right\} \end{aligned}$$

□