

$$\begin{aligned}
 (3) \lg 5 \cdot \log_5 2 \cdot \log_4 3 \cdot \log_9 100 &= \\
 &= \lg 5 \cdot \log_5 2 \cdot \log_4 3 \cdot \log_3 10 = \\
 &= \cancel{\lg 5}^1 \cdot \frac{\lg 2}{\cancel{\lg 5}_1} \cdot \frac{\cancel{\lg 3}^1}{\lg 4} \cdot \frac{1}{\cancel{\lg 3}_1} = \\
 &= \frac{\lg 2}{\lg 4} = \log_4 2 = \frac{1}{2}
 \end{aligned}$$

Serpan 1809@yandex.ru