



$$\blacksquare 1 \quad \frac{1}{2} \log_5 10 - \log_5 \sqrt{2} = \log_5 10^{\frac{1}{2}} - \log_5 \sqrt{2} = \log_5 \frac{\sqrt{10}}{\sqrt{2}} = \log_5 \sqrt{5} = \log_5 5^{\frac{1}{2}} = \frac{1}{2}$$

$$\blacksquare 2 \quad \log_2 3 = p \text{ のとき, } \log_{24} 72 = \frac{\log_2 72}{\log_2 24} = \frac{\log_2 2^3 \cdot 3^2}{\log_2 2^3 \cdot 3} = \frac{\log_2 2^3 + \log_2 3^2}{\log_2 2^3 + \log_2 3} = \frac{3 + 2p}{3 + p}$$