✓10.

$$\lim_{n \to \infty} \left(\frac{n-1}{n+1}\right)^{n^2} = \{1^\infty\} = \lim_{n \to \infty} \left(\frac{n+1-2}{n+1}\right)^{n^2} = \lim_{n \to \infty} \left(\left(1+\frac{2}{-1-n}\right)^{\frac{-1-n}{2}}\right)^{\frac{2n^2}{-n-1}} =$$

$$= \lim_{n \to \infty} e^{\frac{2n^2}{-n-1}} = \lim_{n \to \infty} e^{\frac{2n^2}{-n(1+\frac{1}{n})}} = \lim_{n \to \infty} e^{-2n} = 0.$$