Jaykov Foukzon* (aguidance@excite.com), Israel. *The solution of one very old problem in transcendental numbers theory. Preliminary report.

The solution of one very old problem in transcendental numbers theory. In 1873 transcendality of number e was proved by Ch.Hermite and in 1882 transcendentality of number pi was proved by F.Lindeman. Up to the last time it was not known if: (a) numbers $e+\pi$ are irrational; (b) numbers $\exp(r)$, (here $r$ is rational) are irrational. **Definition.** Arbitrary transcendental number $z$ is called $\#-$transcendental number over the field $Q$, if the following condition is executed: (1) lets $g(z):R$ to $R$ is analytical function which in some environs of point 0 expands into Taylor’s row with coefficients from the field $Q$, (2)$g(z)$ is not equal 0 for all $z$. Arbitrary transcendental number $z$ called $w$-transcendental number over the field $Q$, if $z$ is not $\#-$transcendental number over the field $Q$. For example, number pi by obvious way is $w$-transcendental number over the field $Q$. **Theorem.1.** For any rational number $r$, number $\exp(r)$ is $\#-$transcendental number over the field $Q$. **Corrolary.** Number $e+\pi$ are irrational; (b) $(\pi)\exp(r)$ are irrational. (Received November 02, 2005)