~11. $\lim\limits_{x\to 0} \frac{e^{x^2}-e^{3x^2}}{\arcsin 3x^2} = \left\{\frac{0}{0}\right\} = \lim\limits_{x\to 0} \frac{e^{x^2}(1-e^{2x^2})}{\arcsin 3x^2} = \left|\begin{array}{l}\text{при } \alpha\to 0\\ e^{\alpha}\sim \alpha+1,\\ \arcsin\alpha\sim\alpha\end{array}\right| =$

$= \lim\limits_{x\to 0} \frac{(x^2+1)(1-2x^2-1)}{3x^2} = \lim\limits_{x\to 0} \frac{-2x^2(x^2+1)}{3x^2} = -\frac{2}{3}.$