Konvergence Newtonova integrálu

1. $\int_0^1 x^a\,dx$, kde $a \in \mathbb{R}$. KA $\Leftrightarrow a > -1$.
2. $\int_1^{+\infty} x^a\,dx$, kde $a \in \mathbb{R}$ KA $\Leftrightarrow a < -1$.
3. $\int_0^{1/e} x^a \ln^b x\,dx$, $a, b \in \mathbb{R}$. KA $\Leftrightarrow$ ($a > -1$, $b \in \mathbb{R}$ nebo $a = -1$, $b < -1$)
4. $\int_e^{+\infty} x^a \ln^b x\,dx$, $a, b \in \mathbb{R}$. KA $\Leftrightarrow$ ($a < -1$, $b \in \mathbb{R}$ nebo $a = -1$, $b < -1$)
5. $\int_0^{+\infty} x^a e^{bx}\,dx$ KA $\Leftrightarrow a > -1$ a $b < 0$
6. $\int_1^{+\infty} x^a e^{bx}\,dx$ KA $\Leftrightarrow a \in \mathbb{R}$ a $b < 0$ nebo $b = 0$ a $a < -1$.
7. $\int_0^1 \frac{\sin x}{x^a}\,dx$, $a \in \mathbb{R}$, KA $\Leftrightarrow a < 2$.
8. $\int_0^1 \frac{\cos x}{x^a}\,dx$, $a \in \mathbb{R}$. KA $\Leftrightarrow a < 1$.
9. $\int_1^{+\infty} \frac{\sin x}{x^a}\,dx$ KA $\Leftrightarrow a > 1$, NAK $\Leftrightarrow 0 < a \leq 1$ D $\Leftrightarrow a \leq 0$,
10. $\int_1^{+\infty} \frac{\cos x}{x^a}\,dx$, kde $a \in \mathbb{R}$. KA $\Leftrightarrow a > 1$, NAK $\Leftrightarrow 0 < a \leq 1$ D $\Leftrightarrow a \leq 0$,