[0.5 b] **1.** $f'(x) = \left[\, \text{argsinh} \cosh\left(2x^{-4} + 4\right)\right]' =$

[0.5 b] **2.** $f'(x) = \left[\, \text{tg}(\text{tg}(\text{tg}(\text{tg}\left(-6x\right))))\right]' =$

[0.5 b] **3.** $f'(x) = \left[x^{-5\cosh 4x}\right]' =$

[0.5 b] **4.** $f'(x) = \left[\, \mathrm{e}^{5\,\text{tgh}\left(-2x\right)}\,\right]' =$

[0.5 b] **5.** $f'(x) = \left[\, \cosh^3\left(-4x\right)\right]' = \left[\left(\cosh\left(-4x\right)\right)^3\right]' =$

[0.5 b] **6.** $f'(x) = \left[\frac{3\,\text{tg}\,4x + 6}{-7\,\text{cotg}\,4x + 2}\right]' =$

Výsledky derivácií zjednodušte a upravte (nepoužívajte wolframalpha a jeho reťazové zlomky).

* Sem nič nepísať!   ** Zakrúžkujte, prosím, cvičiaceho a napíšte deň a hodinu cvičenia, napr. pondelok 14.00.

[0.5 b] **7.** $\lim\limits_{x\to\infty} \frac{x^7-1}{x^8-1} =$

[0.5 b] **8.** $\lim\limits_{x\to\infty} \frac{\left|\frac{5}{x}\right|}{\arcsin\frac{2}{x}} =$

[0.5 b] **9.** $\lim\limits_{x\to\infty} \left(1 + \arcsin\frac{2}{x}\right)^{\frac{1}{\sin\frac{4}{x}}} =$

[0.5 b] **10.** $\lim\limits_{x\to 0} \frac{\operatorname{tg} 4x}{|\operatorname{tg} 7x|} =$

[0.5 b] **11.** $\lim\limits_{x\to -\infty} \frac{\operatorname{tg}\frac{2}{x}}{\left|\arcsin\frac{9}{x}\right|} =$

[0.5 b] **12.** $\lim\limits_{x\to 0^+} \left(1 + \arcsin 3x\right)^{\frac{1}{\operatorname{tg} 8x}} =$