483. Umnožak nultočaka funkcije $f(x)=\frac{3x-1}{x+3}-\frac{x+3}{3x-1}-\frac{3}{2}$ je jednak:

1. -1 2. 1 3. -3 4. 3

$$f(x)=\frac{3x-1}{x+3}-\frac{x+3}{3x-1}-\frac{3}{2}$$

$\frac{3x-1}{x+3}=t$ supstitucija

$$t-\frac{1}{t}-\frac{3}{2}=0/\cdot 2t$$

$$2t^2-2-3t=0$$

$$2t^2-3t-2=0$$ kvadratna jednadžba

$$t_{1/2}=\frac{-b\pm\sqrt{b^2-4ac}}{2a}=\frac{3\pm\sqrt{9+4\cdot 2\cdot 2}}{2\cdot 2}=\frac{3\pm\sqrt{9+16}}{4}=\frac{3\pm\sqrt{25}}{4}$$

$$=\frac{3\pm 5}{4}$$

$t_1=2$ $\quad t_2=-\frac{2}{4}$

$t_2=-\frac{1}{2}$

$\frac{3x-1}{x+3}=2/\cdot(x+3)$

$3x-1=2(x+3)$

$3x-1=2x+6$

$3x-2x=6+1$

$x_1=7$

$\frac{3x-1}{x+3}=-\frac{1}{2}\Big/\cdot 2(x+3)$

$2(3x-1)=-(x+3)$

$6x-2=-x-3$

$6x+x=2-3$

$7x=-1/:7$

$x_2=-\frac{1}{7}$

$$x_1\cdot x_2=7\cdot\left(-\frac{1}{7}\right)=-1$$