Cvičení 21. 2. 2022

1) Určete Hf fce f: $y = \frac{-2x+3}{5-3x}$

2) Sestrojte graf fce (bod + asymptoty)

a: $y = -\left(\frac{3}{2}\right)^{x+2} + 4$

b: $y = \left(\frac{5}{3}\right)^{2-x} - 1$

c: $y = \frac{2}{(x-3)^4}$

d: $y = -\frac{4}{(3x+1)^{-5}}$

3) Řešte v R rovnice:

a) $\pi^{x^2+7} - \pi^{2(x+3)} = 0$

b) $\left(\frac{3}{4}\right)^{3x-2} \cdot \left(\frac{16}{9}\right)^{x+1} = \left(\frac{4}{3}\right)^{5x+4}$

c) $\sqrt[x]{3^{4x+4}} = 9^{x+3}$; $x \in N$

d) $8^{\sqrt{3x-8}} \cdot 16 = 32^{\sqrt{3x-8}}$

e) $3 \cdot 2^{x+1} - 2^{x+2} - 2^{x-1} = 48$

f) $2^x - 3^x = \frac{5 \cdot 3^x}{4}$

g) $4^{x+2} - 2 \cdot 4^{x+1} + 4^x = 3^{x+2} + 3^{x+1} + 4 \cdot 3^x$