1) Vzhľadom na T_{95} regulovanej sústavy:

$$T = \frac{1}{6 \div 15} T_{95} = \frac{1}{10} \cdot T_{95} = 0,140774$$

$$T_{95} = 0,10774$$

Vzhľadom na dopravné oneskorenie:

$$T = \frac{1}{4 \div 8} Td = \frac{1}{4 \div 8} \cdot 1 = \frac{1}{6} = 0,1667$$

2.) $G(s) = \frac{15000}{s(14s+1)} e^{-1s}$

Residue

$r = 1111$ $\quad p = -2$, $-0{,}07143$, 0 $\Rightarrow$ $\frac{15000}{s(s+2)(s+0{,}07143)}$

-16111

15000

Padé:

$\frac{-15000s+30000}{14s^3+29s^2+2s} = \frac{-1071{,}4+2142{,}9}{s(s+2)(s+0{,}07143)}$

$= \frac{A}{s} + \frac{B}{s+2} + \frac{C}{s+0{,}07143} = \frac{1071{,}4}{s} + \frac{79{,}3571}{s+2} - \frac{1150{,}8}{s+0{,}07143}$

Prechodová:

$h(t) = y(t) = 1071{,}4 + 79{,}36e^{-2t} - 1150{,}8 \cdot e^{-0{,}07143t}$

$z_1 = e^0 = 1$

$z_2 = e^{-2t}$

$z_3 = e^{-0{,}07143t}$