

Zadatak 6. Odredi x iz jednadžbe: $\frac{4x}{6.\dot{7} + \frac{5}{9} - 0.45\dot{3}} = 3.\dot{3}$

$$\text{Rješenje. } \frac{4x}{6.\dot{7} + \frac{5}{9} - 0.45\dot{3}} = 3.\dot{3},$$

$$6.\dot{7} = 6 + \frac{7}{10} \left(1 + \frac{1}{10} + \dots \right) = 6 + \frac{7}{10} \cdot \frac{10}{9} = 6 + \frac{7}{9} = \frac{61}{9};$$

$$\begin{aligned} 0.45\dot{3} &= \frac{45}{100} + \frac{3}{1000} \left(1 + \frac{1}{10} + \dots \right) = \frac{45}{100} + \frac{3}{1000} \cdot \frac{10}{9}; \\ &= \frac{45}{100} + \frac{1}{300} = \frac{136}{300} = \frac{34}{75} \\ 3.\dot{3} &= 3\frac{1}{3} = \frac{10}{3}; \end{aligned}$$

$$\frac{4x}{\frac{61}{9} + \frac{5}{9} - \frac{34}{75}} = \frac{10}{3}$$

$$\frac{4x}{\frac{66}{9} - \frac{34}{75}} = \frac{10}{3}$$

$$\frac{4x}{\frac{516}{75}} = \frac{10}{3}$$

$$\frac{4 \cdot 75x}{516} = \frac{10}{3}$$

$$4 \cdot 75 \cdot 3x = 516 \cdot 10$$

$$x = \frac{516 \cdot 10}{4 \cdot 75 \cdot 3} = \frac{86}{15}.$$