

Cvičení - 2:

Řešte v R:

Řešení:

A:

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|--|---------------|
| 1) $3^x + 3^{x+1} = 108$ | 3 |
| 2) $2^{x+1} + 2^{x-1} + 2^{x+3} = \frac{21}{8}$ | -2 |
| 3) $7.4^{-x+2} = 3.4^{-x+3} - 5$ | 2 |
| 4) $\frac{4}{5} \cdot 5^0 + 5^{-1} - 25^x + 20.25^{x-1} = 0$ | $\frac{1}{2}$ |
| 5) $3^x \cdot \left(\frac{1}{2}\right)^x + 3^{x+1} \cdot \left(\frac{1}{2}\right)^{x+1} = \frac{5}{3}$ | -1 |
| 6) $2^{2x} \cdot 5^x - 2^{2x-1} \cdot 5^{x+1} = -600$ | 2 |
| 7) $3^x + 3^{x+1} = 7.4^x - 4^{x+1}$ | 1 |
| 8) $2^{x-1} - 2^{x-2} = 5^{x-3} + 2^{x-3}$ | 3 |
| 9) $2.4^x + 5^{x-\frac{1}{2}} = 5^{x+\frac{1}{2}} - 2^{2x-1}$ | $\frac{3}{2}$ |
| 10) $3^x + \frac{9^x}{3} = 3^{x+1} + \frac{9^x}{9}$ | 2 |

B:

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|-------------------------------------|------------------|
| 1) $5^{2x} - 3.5^x = 10$ | 1 |
| 2) $16^x = 6.4^x - 8$ | $1; \frac{1}{2}$ |
| 3) $121^x = 22 + 9.11^x$ | 1 |
| 4) $9^x - 50.3^x = 32.3^x - 9^2$ | $4; 0$ |
| 5) $20 + 2.5^x = (5^x)^2 + 5$ | 1 |
| 6) $4^x + 7.2^{x-2} = 0,5$ | -2 |
| 7) $25^x = 0,2 - 4.5^{x-1}$ | -1 |
| 8) $3^{2x+1} - 3.3^{x+2} = 3^x - 9$ | $-1; 2$ |

C:

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|---|-----------|
| 1) $\left(\frac{1}{3}\right)^{2-3x} = 5^x$ | asi 1,303 |
| 2) $4^x + 3^{x+4} = 4^{x+3} - 3^{x+2}$ | asi 1,24 |
| 3) $2^{3x-1} \cdot 3^{2x+1} = 3.7^{1-3x}$ | asi 0,261 |
| 4) $3^{x+2} - 5^x = 3^{x+4} - 5^{x+2}$ | asi 2,151 |
| 5) $\frac{3^x}{2^{x-1}} - \frac{2^x}{3^{x-1}} = 2^{-x} \cdot 3^x$ | asi 1,355 |