

1. Reši enačbe:

(a)  $8^x = 1$  [R: 0]

(b)  $3^{x-1} = 1$  [R: 1]

(c)  $4^x = 16$  [R: 2]

(d)  $5^{-x} = 125$  [R: -3]

(e)  $\frac{27}{8} = \left(\frac{2}{3}\right)^x$  [R: -3]

(f)  $3^{-x} = \frac{1}{27}$  [R: 3]

(g)  $2^x = -8$  [R:  $\emptyset$ ]

(h)  $\left(\frac{9}{13}\right)^{x+3} = 1$  [R: -3]

(i)  $2^{x-2} = 5^{2-x}$  [R: 2]

(j)  $5^{x-4} = 6^{x-4}$  [R: 4]

(k)  $8^{5-x} = 7^{x-5}$  [R: 5]

(l)  $4^{2x-3} = 7^{x-1,5}$  [R:  $\frac{3}{2}$ ]

(m)  $2^{x^2-7x+12} = 1$  [R: 4; 3]

(n)  $5^{x^2-8x+12} = 1$  [R: 2; 6]

(o)  $(5^{x-1})^{x+1} = (25^x)^{\frac{x}{2}-1}$  [R:  $\frac{1}{2}$ ]

(p)  $(a^{4x-7})^{6x+8} = (a^{3x+2})^{8x-5}$  [R:  $-\frac{46}{11}$ ]

2. Reši enačbe:

(a)  $3^{x-1} \cdot 3^{x+1} = 81$  [R:  $x = 2$ ]

(b)  $2^{x+1} \cdot 4^{x+2} \cdot 8^{x+3} = \frac{1}{16}$  [R:  $x = -3$ ]

(c)  $5^{1-2x} \cdot 5^{1+2x} = 25^x$  [R:  $x = 1$ ]

(d)  $9 \cdot 3^{x+2} = 27^x$  [R:  $x = 2$ ]

(e)  $100^{2-x} \cdot 10^{5x-3} = 1000^{2x}$  [R:  $\frac{1}{3}$ ]

(f)  $0,125^{5x} \cdot 4^{\frac{x-1}{2}} = 32$  [R:  $-\frac{3}{7}$ ]

(g)  $\frac{1}{8} \cdot 2^{2x^3-1} = 4 \cdot 2^{2+x^3}$  [R: 2]

REŠITVE 4. naloge:

3. Reši enačbe:

(a)  $4^x + 4^{x+1} = 5^{x+1}$  [R:  $x = 0$ ]

(b)  $2^{x+1} - 2^{x-1} = 12$  [R:  $x = 3$ ]

(c)  $3^{x+2} - 5 \cdot 3^x - 7 \cdot 3^{x-1} = 5$  [R:  $x = 1$ ]

(d)  $2^x + 2^{x+1} + 2^{x+2} = 7^{x-2} + 7^{x-1}$  [R:  $x = 3$ ]

(e)  $7 \cdot 2^{x-3} + 4 \cdot 3^{x-2} = 3^x - 2^x$  [R:  $x = 3$ ]

(f)  $7 \cdot 3^{x+1} - 5^{x+2} = 3^{x+4} - 5^{x+3}$  [R:  $x = -1$ ]

(g)  $3 \cdot 2^{3x-4} + 125^{x-1} = 8^{x-1} + 30 \cdot 5^{3x-5}$  [R:  $x = \frac{4}{3}$ ]

(h)  $3^{2x} + 5 \cdot 3^{2x-2} - 4 \cdot 3^{2x-1} = 18$  [R:  $x = 2$ ]

4. Enačbe reši grafično in naredi preizkus:

(a)  $2^{-x-1} = 2$  [ $x = -2$ ]

(b)  $3^x = (x-1)^2 + 3$  [ $x = 1$ ]

(c)  $2^x = -2x + 4$  [ $x = 1$ ]

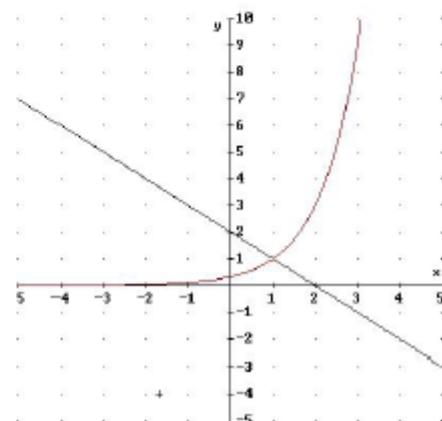
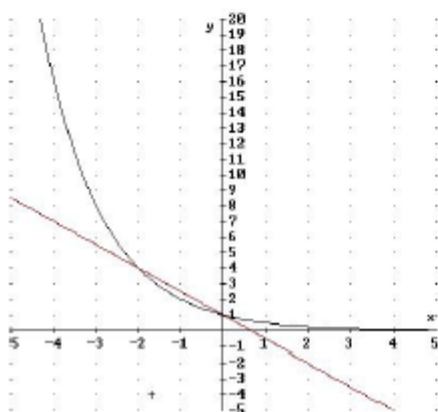
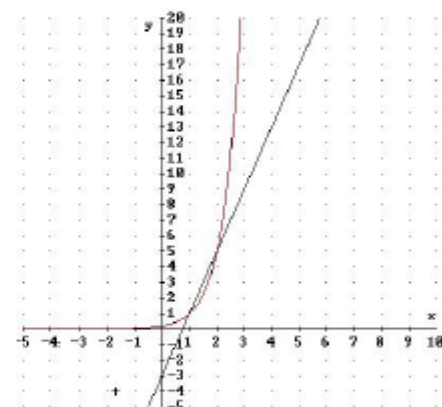
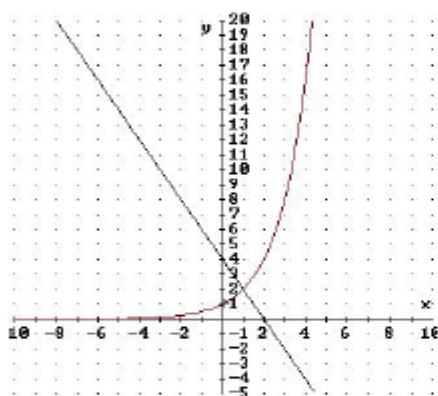
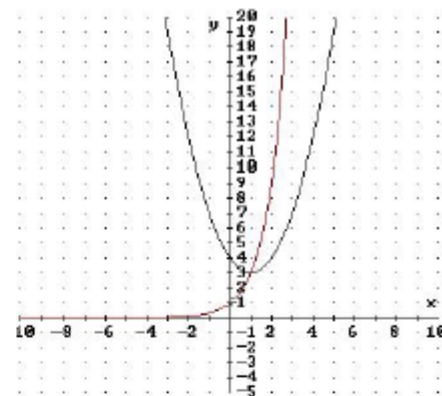
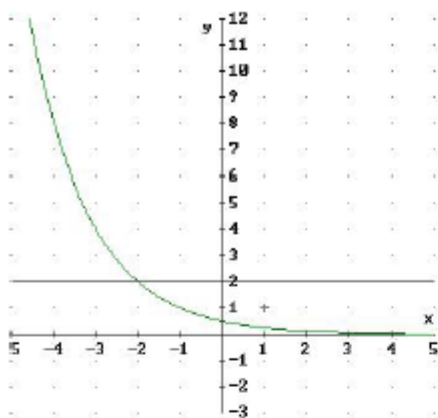
(d)  $5^{x-1} = 4x - 3$  [ $x = 1; x = 2$ ]

(e)  $0,5^x = -1,5x + 1$  [ $x = 0$ ]

(f)  $3^{x-1} = 2 - x$  [ $x = 1$ ]

(g)  $-4^{-x} = -(x+1)^2 - 4$  [ $x = -1$ ]

REŠITVE 4. naloge:



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