COMPITI 2 – EQUAZIONI LOGARITMICHE, FUNZIONI ESPONENZIALI E LOGARITMICHE

Compito 2.1 – equazioni logaritmiche 1/2

Risolvi le equazioni:

1. $\log_{\frac{3}{2}} x = -3$ $\quad x = \frac{8}{27}$
2. $\log_5(3x+1) = 2$ $\quad x = 8$
3. $\boldsymbol{\log_{\frac{1}{2}} \log_3(2x-3) = -2}$ $\quad x = 42$
4. $\log_{\frac{1}{8}} \log_5(2x-5) = 0$ $\quad x = 5$
5. $\boldsymbol{\log_3 x + \log_3(2x+5) = 1}$ $\quad x = \frac{1}{2}$
6. $\log_2(3x-1) - \log_2(x-3) = 2$ $\quad x = 11$
7. $\boldsymbol{\log_2(2x+3) - \log_2(x-1) = 1 + \log_2 3}$ $\quad x = \frac{9}{4}$

Compito 2.2 – equazioni logaritmiche 2/2

Risolvi le equazioni:

1. $\log^2 x - 2\log x - 8 = 0$ $\quad x = 10^4, x = 10^{-2}$
2. $\boldsymbol{2(\log_5 x)^2 - 3\log_5 x = 2}$ $\quad x = 25, x = \frac{\sqrt{5}}{5}$
3. $\boldsymbol{\log_2 x + \log_8 x + \log_{16} x = \frac{19}{6}}$ $\quad x = 4$
4. $\boldsymbol{\log_2 x \cdot \log_{16} x = 4}$ $\quad x = 16, x = \frac{1}{16}$
5. $\log_5 x - 2\log_x 5 = 1$ $\quad x = 25, x = \frac{1}{5}$
6. $\boldsymbol{2\log_2 x - 4\log_x 2 + 7 = 0}$ $\quad x = \sqrt{2}, x = \frac{1}{16}$