

MdC 29/7/14 (1)

Cognome-Nome-Matr: \_\_\_\_\_

1)  $\sqrt{9(x+1)^2 - 16} \geq x+4$

2)  $\frac{2^{-2x} - 2^{-x} - 12}{3^{2x} - 4 \cdot 3^x + 3} \leq 0$

3)  $\frac{|x-1|}{x-2} < 1 + \frac{2}{x-2}$

4)  $\left(\log_{1/2}(x-2)\right)^2 - 5 \cdot \log_{1/2}(x-2) + 6 > 0$

5) Scrivere in forma trigonometrica  $z \in \mathbb{C}$

$$z = \left( \frac{2 - \sqrt{3}i}{2 + \sqrt{3}i} \right)^4$$

6) Scrivere in forma algebrica  $z \in \mathbb{C}$

$$z = \left( \frac{1-i}{1+i} \right)^2 - \left( \frac{1+i}{1-i} \right)^2$$