

DISQUATIONI ESPONENTIALI

$$16^x + 4^x > \frac{5}{16}$$

$$4^{2x} + 4^x > \frac{5}{16}$$

$$4^x = t$$

$$t^2 + t > \frac{5}{16}$$

$$16t^2 + 16t - 5 > 0$$

$$t_{1,2} = \frac{-8 \pm \sqrt{64 + 80}}{16} =$$

$$= \frac{-8 \pm 12}{16} = \begin{cases} -1 \\ \frac{1}{4} \end{cases}$$

$$\begin{array}{c} + \quad + \\ -1 \quad \frac{1}{4} \end{array}$$

$$t \leq -1 \vee t > \frac{1}{4}$$

$$4^x \leq -1 \text{ MAI}$$

$$4^x > \frac{1}{4} \quad 4^x > 4^{-1} \quad \boxed{x > -1}$$

$$\left[\left(\frac{3}{4} \right)^{2x} - \frac{16}{9} \right] (5^{2x} - 5^{-x}) < 0$$

$$\overline{F}_1 > 0 \quad \left(\frac{3}{4} \right)^{2x} - \frac{16}{9} > 0 \quad \left(\frac{3}{4} \right)^{2x} > \left(\frac{3}{4} \right)^{-2}$$

$$2x < -2 \quad \boxed{x < -1}$$

$$\overline{F}_2 > 0$$

$$5^{2x} - \frac{1}{5^x} > 0$$

$$\frac{5^{3x} - 1}{5^x} > 0$$

$$\begin{cases} N > 0 & 5^{3x} > 5^0 & 3x > 0 & x > 0 \\ S^x > 0 & \forall x \end{cases}$$

$$\begin{array}{c} 0 \\ - \quad + \\ + \quad + \end{array} \quad \boxed{x > 0}$$

$\overline{F}_1$	+	-	-
$\overline{F}_2$	-	-	+
	(-)	+	(-)

SF:

$$x < -1 \vee x > 0$$