B. 136 - Resolução:

$$a^{\log b} = b^{\log a} \rightarrow \log a^{\log b} = \log b^{\log a} \rightarrow$$

$$\log b \cdot \log a = \log b \cdot \log a$$

$$\underbrace{\qquad}_{I} \qquad \underbrace{\qquad}_{II}$$

notório que $I = II$.

$$\therefore \quad a^{\log b} = b^{\log a}.$$

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Discente - Paulo Henrique          **Lista 5-**          matrícula: 494837

Exercícios : B154. (itens b, c) , B166 (itens b, d) . B.167 (item d) . B168 (b, d)
B.172 (item d) , B173 (item c) , B189.

154. Resolução : ☑

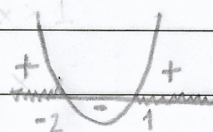b) $f(x) = \log_x (x^2 + x - 2) \rightarrow$ temos:

(I) $x^2 + x - 2 > 0 \rightarrow \Delta = 1^2 - 4 \cdot 1 \cdot (-2) \rightarrow \Delta = 1 + 8 \rightarrow \Delta = 9 \rightarrow$

(II) $0 < x \neq 1$          $x = \dfrac{-1 \pm 3}{2} \Big\langle \begin{array}{l} x_1 = \dfrac{2}{2} = 1 \\ x_2 = -\dfrac{4}{2} = -2 \end{array}$

$x > 0$

$x \neq 1$

$x < -2 \text{ ou } x > 1$