

31.6

$$\text{Έστω : } A = 2^{\log^{\frac{3}{5}}_5} \cdot 3^{\log^{\frac{5}{2}}_2} \cdot 5^{\log^{\frac{2}{3}}_3} > 0$$

$$\log A = \log \left[2^{\log^{\frac{3}{5}}_5} \cdot 3^{\log^{\frac{5}{2}}_2} \cdot 5^{\log^{\frac{2}{3}}_3} \right] =$$

$$= \log 2 \cdot (\log 3 - \log 5) + \log 3 (\log 5 - \log 2) + \log 5 (\log 2 - \log 3) =$$

$$\log 2 \cancel{\log 3} - \log 2 \cancel{\log 5} + \log 3 \cancel{\log 5} - \log 3 \log 2 + \log 5 \cancel{\log 2} - \log 5 \cancel{\log 3} = 0$$

$$\text{Οπότε } \log A = 0 \Rightarrow A = 1$$