

Β ΛΥΚΕΙΟΥ ΑΛΓΕΒΡΑ

31.6

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

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

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

$$\cancel{\log 2 \log 3} - \cancel{\log 2 \log 5} + \cancel{\log 3 \log 5} - \cancel{10g3 \log 2} + \cancel{\log 5 \log 2} - \cancel{\log 5 \log 3} = 0$$

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