

EJERCICIO MIBE 2047:

Simplificar:

$$\frac{1}{2} \sqrt{28} - \frac{2}{5} \sqrt{63} + \frac{1}{8} \sqrt{175} =$$

$$\begin{array}{r|l} 28 & 2 \\ 14 & 2 \\ 7 & 4 \\ 1 & 7 \end{array} \quad \begin{array}{r|l} 63 & 3 \\ 21 & 3 \\ 7 & 9 \\ 1 & 21 \end{array} \quad \begin{array}{r|l} 175 & 5 \\ 35 & 5 \\ 7 & 25 \\ 1 & 175 \end{array}$$

$$= \frac{1}{2} \sqrt{2^2 \cdot 7} - \frac{2}{5} \sqrt{3^2 \cdot 7} + \frac{1}{8} \sqrt{5^2 \cdot 7} =$$

$$= \frac{1}{2} \cdot 2 \sqrt{7} - \frac{2 \cdot 3}{5} \sqrt{7} + \frac{5}{8} \sqrt{7} =$$

$$= \left(1 - \frac{6}{5} + \frac{5}{8} \right) \sqrt{7} =$$

$$= \frac{40 - 48 + 25}{40} \sqrt{7} = \boxed{\frac{17}{40} \sqrt{7}}$$