

EJERCICIO MIBE2303:

Resuelve y simplifica:

$$a) (\sqrt[3]{25})^4 = (\sqrt[6]{5^2})^4 = \sqrt[6]{5^8} = \sqrt[3]{5^4} = 5\sqrt[3]{5}$$

$$b) 3\sqrt{8} + 4\sqrt{32} - 6\sqrt{512} =$$

$$= 3\sqrt{2^3} + 4\sqrt{2^5} - 6\sqrt{2^9} =$$

$$= 3 \cdot 2\sqrt{2} + 4 \cdot 2^2\sqrt{2} - 6 \cdot 2^4\sqrt{2} =$$

$$= 6\sqrt{2} + 16\sqrt{2} - 96\sqrt{2} =$$

$$= -74\sqrt{2}$$

8		2	32		2	512		2
4		2	16		2	256		2
2		2	8		2	128		2
1			4		2	64		2
			2		2	32		2
						16		2
						8		2
						4		2
						2		2
						1		

$$c) \sqrt[3]{25} \cdot \sqrt[4]{125} + (\sqrt[5]{5})^5 =$$

$$= \sqrt[3]{5^2} \cdot \sqrt[4]{5^3} + \sqrt[4]{5^5} = \sqrt[12]{5^8} \cdot \sqrt[12]{5^9} + \sqrt[4]{5^6} =$$

$$= \sqrt[12]{5^{17}} + \sqrt[4]{5^6} = 5\sqrt[12]{5^5} + 5\sqrt[4]{5^2}$$

$$d) \sqrt[3]{16} + 4\sqrt[3]{250} - 5\sqrt[3]{54} =$$

$$= \sqrt[3]{2^4} + 4\sqrt[3]{2 \cdot 5^3} - 5\sqrt[3]{2 \cdot 3^3} =$$

$$= 2\sqrt[3]{2} + 4 \cdot 5\sqrt[3]{2} - 5 \cdot 3\sqrt[3]{2} =$$

$$= 2\sqrt[3]{2} + 20\sqrt[3]{2} - 15\sqrt[3]{2} =$$

$$= 7\sqrt[3]{2}$$

250		2	54		2
125		5	27		3
25		5	9		3
5		5	3		3
1			1		