

4.- Efectúa las siguientes operaciones:

$$a) \left(\frac{2^3 \cdot 3^6}{2^5 \cdot 3^4} \right)^3 = (2 \cdot 3)^3 = 2 \cdot 3$$

$$b) [(-2)^3 \cdot (-3)^2 \cdot (-5)]^2 = 2 \cdot 3 \cdot 5$$

$$c) \left(\frac{8 \cdot 9 \cdot 125}{2 \cdot 3 \cdot 25} \right)^3 = \left(\frac{2 \cdot 3 \cdot 5}{2 \cdot 3 \cdot 5} \right)^3 = (2 \cdot 3 \cdot 5)^3 = 2 \cdot 3 \cdot 5$$

5.- Calcula las siguientes raíces cuadradas si se puede:

$$a) \sqrt{169} =$$

$$d) \sqrt{\frac{4}{36}} = \frac{\sqrt{4}}{\sqrt{36}} = \frac{2}{6} = \frac{1}{3}$$

$$f) \sqrt{\frac{3600}{225}} = \frac{\sqrt{3600}}{\sqrt{225}} = \frac{60}{15} = 4$$

$$b) \sqrt{-25} =$$

$$c) \sqrt{6400} =$$

$$e) \sqrt{\frac{-49}{100}} =$$

6.- Opera:

$$a) (-3)^2 \cdot \sqrt{16} - (5^2 - 11) + (10 - 8)^2 = 9 \cdot 4 - (25 - 11) + 2^2 = 36 - 14 + 4 = 26$$

$$b) (3^2 - 4)^3 : [5 + 3 \cdot (-5)] = (-5)^3 : [5 - 15] = -125 : (-10) = 12.5$$

$$c) \frac{3}{2^2} : \frac{5}{2} - \sqrt{\frac{9}{25}} + \left(\frac{2}{3}\right)^{-2} = \frac{3}{4} : \frac{5}{2} - \frac{3}{5} + \left(\frac{3}{2}\right)^2 = \frac{3}{4} \cdot \frac{2}{5} - \frac{3}{5} + \frac{9}{4} = \frac{3}{10} - \frac{3}{5} + \frac{9}{4} = \frac{3}{10} - \frac{6}{10} + \frac{22.5}{10} = \frac{19.5}{10} = 1.95$$

$$d) \sqrt{\frac{75}{48}} - \left(\sqrt{\frac{4}{81}}\right)^{-2} + \frac{\sqrt{36}}{6} = \sqrt{\frac{5}{4}} - \left(\frac{2}{9}\right)^{-2} + \frac{6}{6} = \frac{\sqrt{5}}{2} - \frac{81}{4} + 1 = \frac{\sqrt{5}}{2} - \frac{80}{4} + \frac{2}{4} = \frac{\sqrt{5}}{2} - \frac{78}{4} = \frac{\sqrt{5}}{2} - \frac{39}{2} = \frac{\sqrt{5} - 39}{2}$$