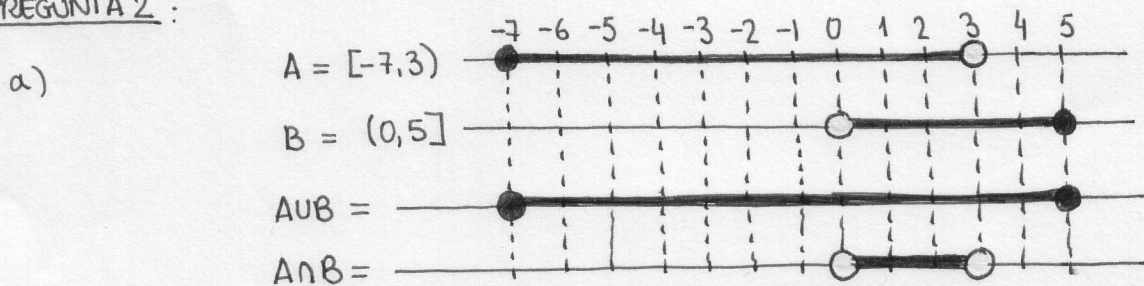


PREGUNTA 1:

$$\begin{aligned} \text{a) } \frac{3,5 + 2,3}{1,6 + 1,02} &= \frac{\frac{35}{10} + \frac{21}{9}}{\frac{15}{9} - \frac{92}{90}} = \frac{\frac{7}{2} + \frac{7}{3}}{\frac{5}{3} - \frac{46}{45}} = \frac{\frac{21+14}{6}}{\frac{75-46}{45}} = \frac{\frac{35}{6}}{\frac{29}{45}} = \frac{35}{6} \cdot \frac{45}{29} = \\ &= \frac{1575}{174} = \frac{525}{58} \end{aligned}$$

$$\begin{aligned} \text{b) } \left(\frac{16}{25}\right)^{-2} \cdot \left(\frac{125}{32}\right)^3 \cdot \left(\frac{10}{8}\right)^4 &= \left(\frac{2^4}{5^2}\right)^{-2} \cdot \left(\frac{5^3}{2^5}\right)^3 \cdot \left(\frac{2 \cdot 5}{2^2}\right)^4 = \left(\frac{5^2}{2^4}\right)^2 \cdot \left(\frac{5^3}{2^5}\right)^3 \cdot \left(\frac{5}{2^2}\right)^4 = \\ &= \frac{5^4}{2^8} \cdot \frac{5^9}{2^{15}} \cdot \frac{5^4}{2^8} = \frac{5^{13}}{2^{23}} \cdot \frac{2^8}{5^4} = \frac{5^9}{2^{15}} \end{aligned}$$

PREGUNTA 2:

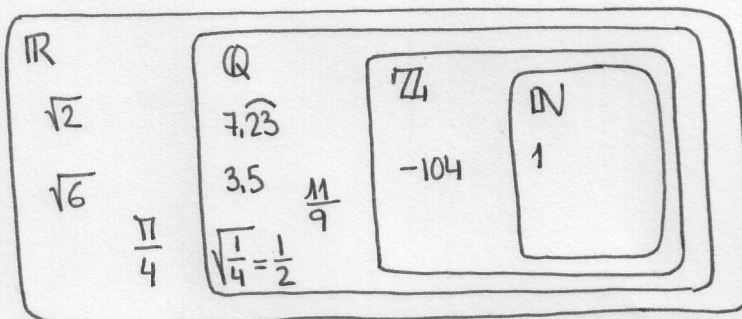


$$A \cup B = [-7, 5] = \{x \in \mathbb{R} / -7 \leq x \leq 5\}$$

$$A \cap B = (0, 3) = \{x \in \mathbb{R} / 0 < x < 3\}$$

$$\begin{aligned} \text{b) } 31940000 &= 3,194 \cdot 10^7 \\ 0,0967254 &= 9,67254 \cdot 10^{-2} \end{aligned}$$

PREGUNTA 3:



PREGUNTA 4:

$$\text{a) } (-3)^4 \cdot (-3^4) = 3^4 \cdot (-1) \cdot 3^4 = -3^8$$

$$\text{b) } [(2^4 \cdot 2^{-8})^{-1}]^{-4} = [(2^{-4})^{-1}]^{-4} = 2^{-16} = \frac{1}{2^{16}}$$