

Past 1

no 4

$$\begin{aligned}\text{Remaining} &= \text{Initial con.} - (\text{Initial} \times \text{mineral... rate}) \\ &= 20 \text{ mg/L} - (20 \text{ mg/L} \times 0.7) \\ &= 20 \text{ mg/L} - 14 \text{ mg/L} = 6 \text{ mg/L}\end{aligned}$$

no 5.

$$\begin{aligned}&= 0.5 \times 120 \times 10 \\ &= 5 \times 120 = 600 \text{ mg}\end{aligned}$$

$$600 \times 10^{-3} = 0.6 \text{ grams}$$

no 6.

$x = \text{mass of } \text{Ca}^{2+}$

$$\% \text{ mass} = \frac{\text{mass of } \text{Ca}^{2+} - \text{mass of } \text{Ca}^{2+}}{\text{mass of } \text{Ca}^{2+}} \times 100$$

$$65 = \frac{x - 35}{x} \times 100$$

$$0.65x = x - 35$$

$$35 = 0.35x$$

$$100 = x$$

no 16.

$$\text{density of } \text{Ca}^{2+} = \text{density of } \text{Ca}^{2+} \times \text{mass of } \text{Ca}^{2+}$$

$$= 0.1 \text{ mm}^2 / \text{mm}^3 \times 1.5$$

$$= 1.5 \text{ mm}^2 / \text{mm}^3$$