

Prova 1

1)

a) $C = w \cdot d \cdot 1000$

$C = 0.98 \cdot 0.01 \cdot 1000$

$C = 9.8 \text{ g/L}$

$D = \frac{3.6734}{250} = 0.01$

b) $M = \frac{w \cdot d \cdot 1000}{MM} = \frac{0.98 \cdot 0.01 \cdot 1000}{90} = 0.10 \text{ mol/L}$

$C_1 \times V_1 = C_2 \times V_2$

$0.10 \times 250 = C_2 \times 100$

$25 = C_2 \times 100$

$C_2 = 4 \text{ mol/L}$

2) a)

$1.84 \text{ g} \text{ --- } 1 \text{ ml}$
 $x \text{ --- } 1200 \text{ ml}$

$x = 2.208 \text{ g de solução}$

$95 \text{ g} \text{ --- } 100 \text{ g}$
 $x \text{ --- } 2.208 \text{ g}$

$x = 2.097,6 \text{ g de } H_2SO_4$

b) $M = \frac{w \cdot d \cdot 1000}{MM}$

$MM = H_2SO_4 = 98,1$

$M = \frac{0.95 \cdot 1.84 \cdot 1000}{98,1} = 17,81 \text{ mol/L}$

a) $25,0 \text{ g} \text{ --- } 1000 \text{ ml}$
 $x \text{ --- } 250 \text{ ml}$
 $x = 6,25 \text{ g}$

$1 \text{ mol } H_2SO_4 \text{ --- } 98,1 \text{ g}$
 $x \text{ --- } 6,25 \text{ g}$
 $x = 0,063 \text{ mol}$

$C_1 \times V_1 = C_2 \times V_2$

$21,37 \times 1200 = 0,063 \times V_2$

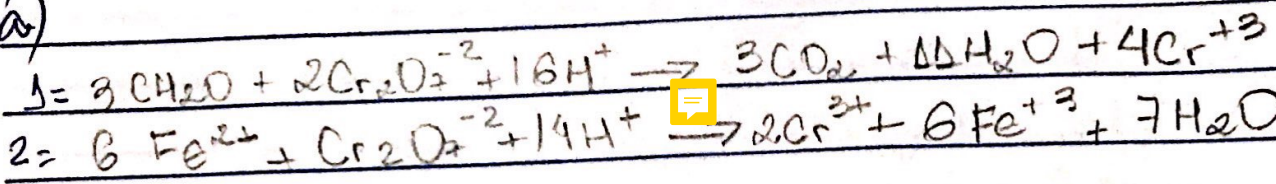
$25.64 = 0,063$

$17,81 \text{ mol} \text{ --- } 1000 \text{ ml}$
 $x \text{ --- } 1200 \text{ ml}$
 $x = 21,37 \text{ mol}$

1 / 1

3)

a)



b)

1 mol de CO ₂	— 22,4 L	MM = CH ₂ O = 30
x	— 134,4 L	
x = 6 mols		

3 CH ₂ O — 3 CO ₂	1 mol CH ₂ O — 30g
6 mol CH ₂ O — 6 mol CO ₂	6 mol CH ₂ O — x
	<u>x = 180g CH₂O</u>

4)



b)

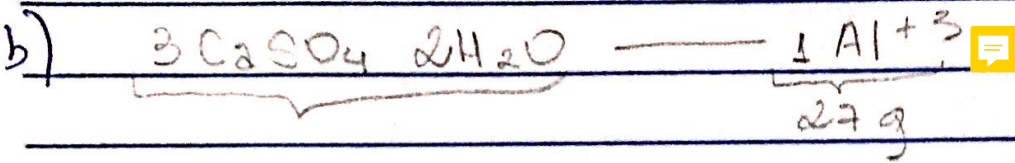
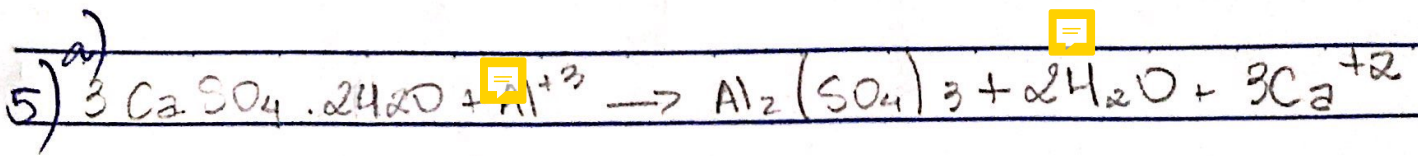
MM = O ₂ = 32	1 mol O ₂ — 32g	
	50 mol O ₂ — x	
	x 1.600g de O ₂	

c)

$$32 \times 44 = 1.408$$

$$114 \times 4 = 456$$

456	— 1.408	
x	— 1,056	x 342g



$3 \times 172g$



$516g \quad \text{---} \quad 27 \text{Al}$

$x \quad \text{---} \quad 80 \text{Al}$

$x = 1.528,88g \text{ CaSO}_4 \cdot 2\text{H}_2\text{O}$

↳ Agente limitante

$516g \quad \text{---} \quad 27 \text{Al}$

$x = 52,32 \text{Alg} \quad \text{---} \quad \text{EXCESSO}$

$1000g \quad \text{---} \quad x$