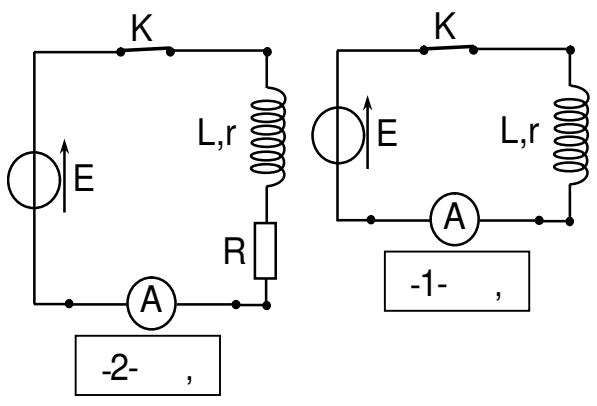
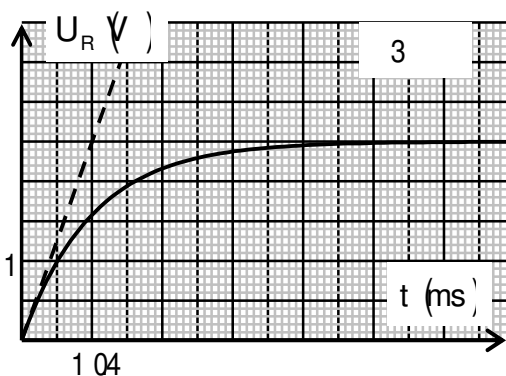


, ' ^ ' fi " ' fi ' ' 1 ' ,  
 Ł ^ ' p ' ) 1 ' ,  
 \* H ) / 1 H ' " , a ' H @ ... ' E P —  
 2020 3 104<sup>a</sup> f 1 ' : , ' fi  
 Q3 ) " ' , E / a P2 ' 1 §

9HŁH<sup>a</sup> ,  
 ( 7 13) D H ' !2 ' ,  
 ( 06 ) D H ' 1 F ' ,  
 • a ' 1 8 ' , 6 • 0 ' ' F , ) / H 17 F1 ' 1 £ 1 • a ' 1 18 7 ' ,  
 . \* ' H Ł / , / a ) 1 ' 1 , % H Ł a ' ,  
 :  
 ) ' H a 9 • œ <sup>238</sup>Pu E H B H H ' 1 B 8 -1<sup>a</sup> 5  
 . ° 1 B ~ H ( B H Ł ' H Ł £ ' \* 7 £ a ' , <sup>A</sup>U<sup>a</sup> E H B H ' 1 H B  
 a 9 • 0 ' • a ) / E H B H H \* ' 1 1 B 8 - # 0 a  
 . ' ) ' H<sup>a</sup> / / £ O E Ł Ł 1 / F H Ł H B + / B H ' C / - ( ( #  
 N<sub>0(Pu)</sub> I C ' \* t F<sup>a</sup> 2 : ' N<sub>(U)</sub> N<sub>(Pu)</sub> F<sup>a</sup> ) 1 , # @  
 . 8 8 a h s<sub>2</sub> » \* ' 0 • a ' ) / a ' / a ' ' 7 0 % ' a / , 1 7 B 1 -2  
 . ( ' C ' \* ( # £ ' ,  
 A<sub>0</sub> = 9,5 · 10<sup>0</sup> Bq ' / B ' 7 • F # ) 1 / a f , 7 ' ' H D Ł — • ' ) ( a ° a  
 (L) B (r) 0 H :



E ' 1 H @ @ a Ł / 1 H 7 ' a Ł  
 ( r ) • H § ' / a ' H ' aa F a £  
 : F B § 1 F B C B 0 H B H ' 0  
 1 a 1 B a ' -1 - a H Ł Ł H a D ' H ' 1 ( B ' ,  
 K 7 ' / . E = 6 V H F a a 1 H ' ,  
 I<sub>0</sub> = 428 mA a 1 a 1 B a ' , E 0 B a # B ' 8  
 D H ' 1 ( B ' 0 B a ' , B a , ° > - Ł ,  
 » H . H • H ' Ł Ł R = 10 V O E a H H # 0 B 2 - • A Ł Ł H a ' 1 ( B ' ,  
 -3- • Ł Ł H F ' ' , » £ ( = 0 ) / , 7 ~ / H 7 a ' 2 ' 2 ° B ' B Ł 1 ' ,



$$\frac{du_R}{dt} + A u_R(t) = B :$$

$$\frac{a}{\beta} \rightarrow 1/\beta \rightarrow \infty \quad \text{for } A, B \rightarrow +\beta \rightarrow \infty$$

$$1 \leq \beta \leq 2$$

. FB FB§ 7L • H ' ' 0± £ #3

$$u_b = f(t) \cdot H$$

0, 52 m s<sup>-2</sup>, D a

7:

OE / ' 0 ° H ° / £ C ± F ° £ 1 § D ' ° 5 » £ / £ # 0 F ° 0 / ' 1 # ,

: ' 1 » ' ° a ±1 ± )1" / β» H E 61 — ' ' 0 H β ' \* a a ' a

K 7 B » H B ~~Q~~# a H a - . a H # 1 '1 £ a ' Q H H0/ H-a

$$. (H \pm \text{£} E_{\text{a}} / 1' ( ' 2\beta$$

F3 1 ' 1 H 'H )1' / 1' ) / • F1H7 a EXAO 2 c a ± a ' F£ • !

$$\frac{1}{2} \frac{dH}{dt} = \beta \frac{1}{2} \frac{dH}{dt} = \beta \frac{1}{2} \frac{dH}{dt}$$

|                     |     |     |     |   |     |
|---------------------|-----|-----|-----|---|-----|
| i (mA )             | 2 4 | 1 8 | 1 2 | 6 | 0   |
| U <sub>c</sub> (V ) | 0   | 3   | 6   | 9 | 1 2 |

: B B a H > H a 7 §) ' E # 1 #

1 H ' 1H7 B a ' c)a/p 0-EXAO 2 B 7 a ' 2'2 o B1 E #1'11

.F<sup>a</sup>2 ' D § <sup>a</sup>H ' <sup>a</sup> ' F<sup>a</sup>H 1 ' ,

1 ' £ • 1 H ' 1 £ 7 » B ' 0.1 B '

[illegible]

$$\frac{dU_c}{dt} + \frac{1}{RC}U_c = \frac{E}{RC} \quad ; \quad )1$$

$$U_C(t) = E \frac{1}{\tau} e^{-t/\tau} \quad ; \quad \tau = RC \quad ; \quad \tau = 1 \text{ ms} \quad ; \quad \tau = 1 \text{ ms}$$

[illegible]

$$i = \frac{1}{B} u_c \quad \frac{E}{B} : \beta \quad ' ) 1 \quad ' " * ' fi \quad . 1 ' 3 ^{\circ}$$

RE<sup>a</sup> β L ≠ G<sub>3</sub> # D(H<sub>C</sub>): ' " L Lβ ' .<sup>a</sup> β.2'3 L/

$$\frac{U_C}{U_R} = e^{t/t} \quad 1 : F \# E \beta_R ( ) = E e^{t/t} : ' , 1 1 . 4$$

$$\frac{U_C}{U_R} = 147,413 \quad t_m = 1.175 (s) \quad 3 \beta ' ' / " L . 12 . 4 \#$$

$$. ( ) F^{a2} ' * / \# \# ' ,$$

$$\frac{t_m}{t} \neq ' ( \neq E D_m \S F \neq ' 3 ' 8 E^{a2} ' * F 1 / \neq$$

$$t_m \quad 8 \quad E \quad 2 \beta ' \quad D H // ^a , ' ,$$

$$. \quad C \quad ' \quad \neq 5 \beta$$

$$(\quad 07): \underline{\hspace{2cm}}$$

$$(\quad 07): \underline{\hspace{2cm}}$$

A • ! H ^ a a \neq 3 F , ) chauffeurette chimique ^ a ' § \neq ^ a ,

7 ^ a D H ^ a ' ^ a / § \neq 51 (CH<sub>3</sub>COO<sup>-</sup> + Na<sup>+</sup>) E H \beta / H » ' \* ' H

3 ' \neq ' # / \beta / - \neq ; ' E H + \beta ' E / ^ a / ' # / ^ a / ' ,

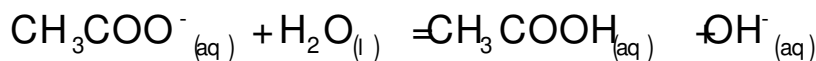
. ) 1 ' 1 E » ' ' 10 ' ^ a ' § \neq ^ a ' ^ a / \beta / / E ^ a ) 1 ' 1 E ' 1 1 E ^ a

pour la science 2008 ^ a F ^ a

$$M (CH_3COONa) = 82 \text{ g/ mol} \quad K_e = 10^{-14} : * 7 ^ a ' ,$$

$$: E H \beta / H » ' * ' H \quad \beta \emptyset / I ^ a D H$$

$$: \beta ! ^ a a ' \quad E \quad E ' \quad / \quad ^ a \# , 0 ^ a \gg ^ a F D H CH_3COONa E H \beta / H » ' * ' H$$



$$^ a S D H E ^ a \quad , 25 \gg E \quad E 1 ' 1 E \quad 1 100 ml ^ a ' \quad E H \beta / H » ' n_0^* = 10^{-2} \text{ mol } (\% \text{ OF } ^ a$$

$$. 8,9 \quad E H \quad @ ' ,$$

$$. E / ' 2 D H \#$$

$$t_{f1} ( \neq \# E K_e , C , pH \quad \beta / \quad \gg \quad E \quad t'_{f1} \quad , \quad E \neq F ' . 2 \quad ,$$

$$. \quad E \neq ' E C , t_{f1} \quad \beta / \quad \gg \quad E ' \quad , \quad K ' F 2 ' H ^ a ' * 3 \quad 1 \quad ,$$

$$H ^ a 1 \emptyset 2 \beta D H E ^ a ' D H \gg E \quad 1 7 ^ a a ' \quad E \% ' \quad \beta F \emptyset_0 D H E ^ a a E \quad 0 4 \S$$

$$C \neq 10^{-3} \text{ mol / l}$$

$$\neq t'_{f2} 0 ^ a \quad E / \neq ' \quad E ' \quad \emptyset 0 ^ \circ \quad ( \neq E \#$$

$$: E H \beta / H » ' * ' H \quad \beta \emptyset / II ^ a D H$$

$$130 \text{ g } E \quad 100 ml \quad E ^ a E ^ a ' \quad § \neq ^ a ' \quad ^ a \quad \$ _0 ^ a ' E H \beta / H » ' * ' H \quad \beta \emptyset$$

$$: C \quad 0 E \quad 1 \beta E H ^ a 0 3 \quad ' \quad , \quad H / ^ a ' \quad ' \quad F ^ a /$$

$$S_0 \quad D H E ^ a 10 \neq ^ a / / ) S_1 \quad \beta H \quad E ^ a E 1 E H$$

fi : E ' ,

' E / 9 ' i , °

! a ' 16+ £ DH £ a £ £ a ' H 1 •

$\delta_1$  BH £  $V_1 = 25 \text{ ml}$  a £ :0 §

$C_a = 4.5 \cdot 10^{-1} \text{ mol / L}$   $\text{CH}_3\text{O}^+ + \text{Cl}^-$

6 a £ DH £  $V_a$  EE ££ / , #1 H E HB / H » ' \* ' H 6 a £ DH £ £ £ , ! a

(4) • FB £  $i\text{-H}^a$  ( ' )  $\text{pH} = f(V_a)$  FB £ £ a 2 a £ ± 1 D PH £ a A i a ! ' a ' 1 H

. 77 § E ± 1 a , / a 0 01 a BH H 1 ' r

. \$ 7 ' 1 , ##2

(E HB H 1 / B \* ' H a 1 B H ) • a ' FB a FB ) / a / ' ( ( #

. \$ ' 7 B ' / £

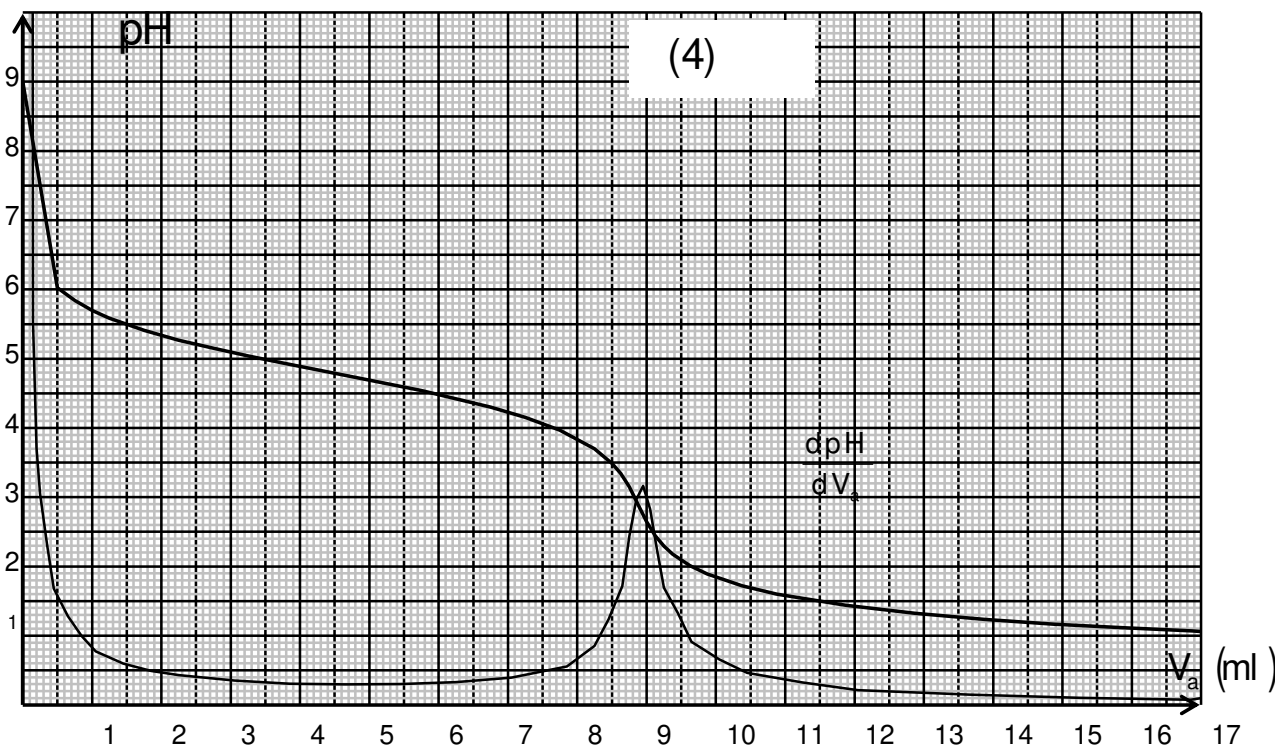
$$\frac{[\text{CH}_3\text{COO}^-]}{[\text{CH}_3\text{COOH}]} = 1$$

' £ B CE ( i B 0 ! ' a ' 16+ £ DH £  $V_a$  E £ ' A / / £

$(\text{CH}_3\text{COOH} / \text{CH}_3\text{COO}^-)$   $\text{pK}_a$  ± ' 2 H

$S_0$  DH £ a 1 H a ' 2 B DH £ a 1 H a ' ( 2 B #

. 3 ' , ± a ' . ' a a ' ) 1 / H ' a ± a ' E HB / £ H » ,



! • F % FH H a