

Student 1 – name

Student 2 – name

Group

Date/Time

Table nbr.

## Worksheet - Lab 2

rev 7e

**1. Study of a rectangular wave with a DC offset.**

a)  $U_P =$        $f =$        $U_{DC} =$

$C_{X_{optim}} =$       [s/div]     $C_{Y_{optim}} =$       [V/div]     $C_{X_{cal}} =$       [s/div]     $C_{Y_{cal}} =$       [V/div]

$N_{X_T} =$       [div] ;     $N_{Y_{Upp}} =$       [div];

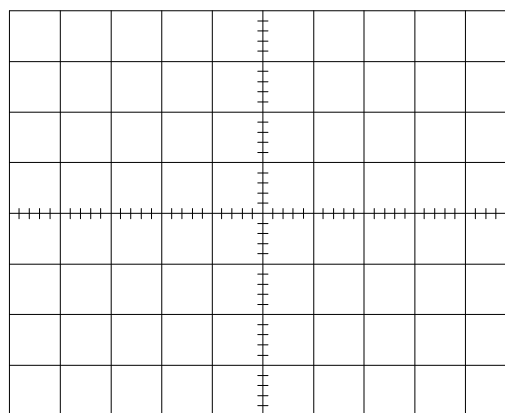
$T =$       [ms] ;     $U_{PP} =$       [V] ;

$N_{Y_{Udc}} =$       [div]

b)  $\varepsilon_T =$        $\varepsilon_{Upp} =$

c)  $\varepsilon_{2T} =$        $\varepsilon_{2Upp} =$

Explanation for error:



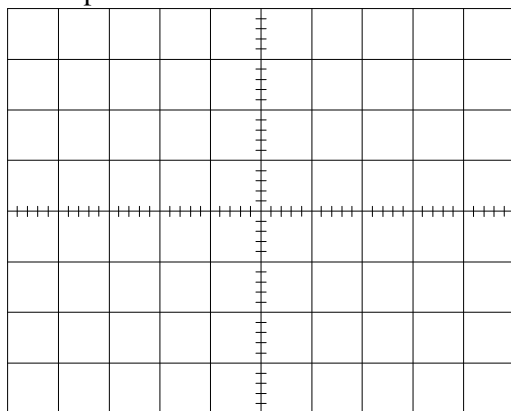
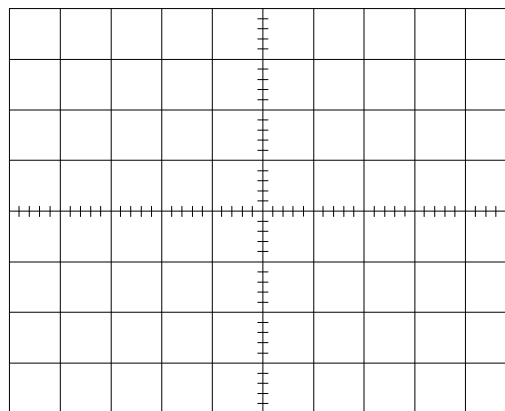
Triangular wave (DC)

**2. Adjusting oscilloscope trigger:**

a)  $U_{Tmin} =$       [V]     $U_{Tmax} =$       [V]    Explanations:

$U_{T50\%} =$       [V]

b) Draw the positions of the arrows !

Rising slope     $U_{T1} =$ Falling slope     $U_{T2} =$ **3. Study of rectangular signals:**

a)  $U_{P3} =$       [V]     $T_3 =$       [    ]

$C_X =$       [    s/div]     $C_Y =$       [V/div];

b)

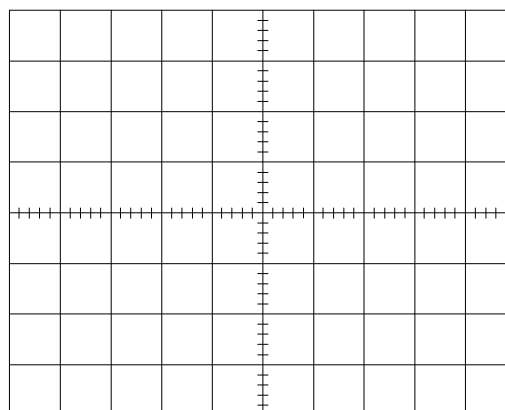
$T =$       [ms]     $\tau =$       [ms]

$\eta_{meas} =$        $\varepsilon_{\eta} =$       [%]

b.3  $U_{CC} =$       [V]

b.4  $U_{CC\text{ calc}} =$        $U_{CC\text{ meas}} =$

Explanation:



#### 4. Measurement of the rise time of a rectangular signal:

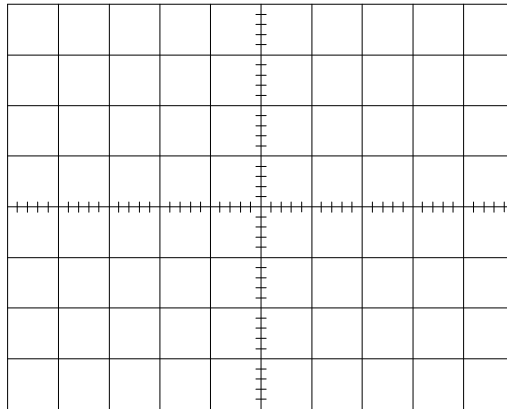
a)  $t_1 =$  [ns] ;  $t_2 =$  [ns];  $t_{rise} =$  [ns]; b)  $t_{rise 2} =$  [ns]

c) Explanation:

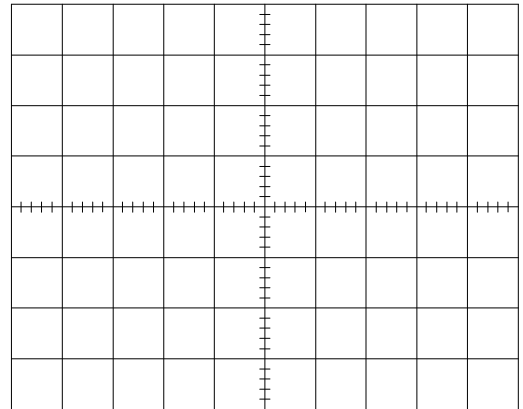
#### 5.5. Study of the oscilloscope with 2 inputs:

a) Trigger: Source = Slope=  $U_T =$  [V]  $f =$  [Hz]

b)



Sum signal



Difference signal

#### 6 Study of trigger signal sources

a) a.1 Explanation:

a.2 Explanation:

a.3 Explanation:

a.4 Explanation:

a.5 Trigger: Source= Slope=  $U_P =$  [V]  $f =$  [Hz]

b) b.1 Remark:

b.2 Explanation:

c) c.1 Explanation:

c.2 Explanation:

$f_{mains} =$  [Hz]

#### 7. Trigger AUTO/NORM

a) NORM:  $f_{sincro} =$  [Hz] AUTO:  $f_{sincro} =$  [Hz]

b)  $U_{DC \text{ AUTO meas}} =$   $U_{DC \text{ NORM meas}} =$  Explanation: