_____ _____ ____ _____ ____

Student 1 – Name and surname Student 2 – Name and surname Group Date/Time Table

Worksheet M4 rev 1

1. ***Measurement of the rise time, using the double time base***
   C_{xB} (W)= N_{xB}= t_{rise}=

2. ***Measurements in the Average Mode, and in the Envelope Mode***
   a)A_{nPP}= b)A_{sgn}= c)A_{nPP}(persistence) =

   What happens with the noise ? Why ?

   Comment upon the differences between the measurements from *a* and *c*.

3. ***Measurements on an amplitude modulated signal***
   a) A_{max}= A_{min}=
   b) A_{med}= A_{min}= A_{max}=
   c) m=?

4. ***Measurement of the sampling period***
   a) T_s= b) $T_{s\ calc}$= c) T_{s1}= $T_{s1\ calc}$=

5. ***Measurement of the rise time***
   a) t_{rise1}= b) t_{rise2}=

   What happens with the rise time ? Explain the results obtained based on the measurements from 4.

6. ***Measurement of the noise***
   a) t_{noise1}= b) t_{noise2}= c) t_{noise3}=

   How can the results be explained ?

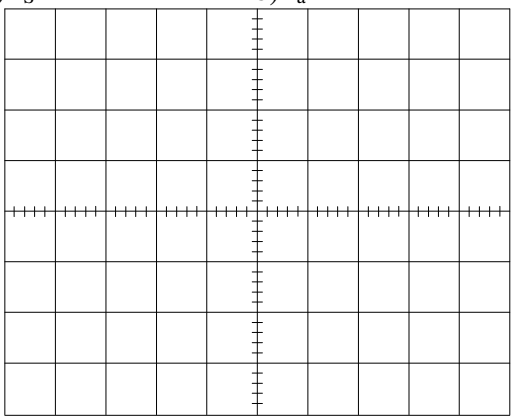
7. ***Measurement of the instability of the period of a signal***
   a) ΔT_1= b) ΔT_2= ΔT_3= c) ε[%]=
   Why does the instability of the rising time modify ?

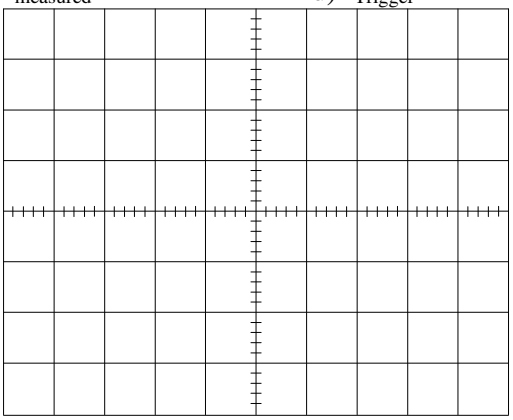
8. ***The effect of the aliasing in the frequency domain***
   a) f_{sgn}= f_{max}= Relation:

   b) f_{sgn1}= $f_{S\ 1}$ = Explanation:

9. ***The effect of the aliasing in the time domain***

a) f_S = b) f_a = c) $f_{measured}$ = d) $f_{Trigger}$ =





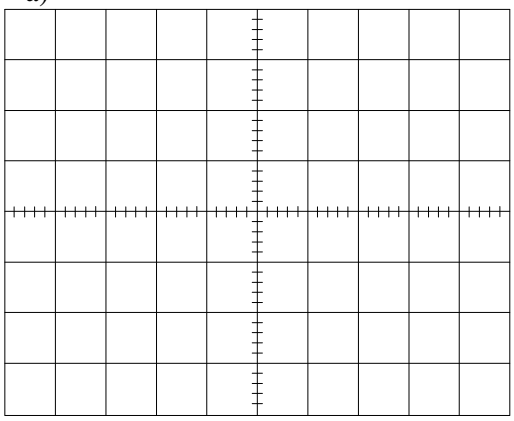
c) aliased image d) image in Peak Detect mode

e) f_x = C_X' = f_S' =
Explanation:

f) $C_{X\,min}$ = g) N_S =

10. ***Measurements on a multilevel signal***

a)



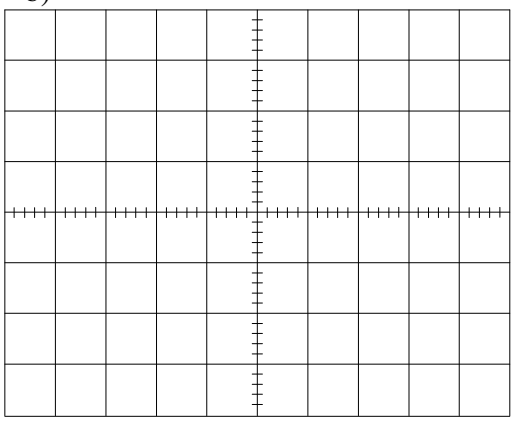
CLK Explanations:

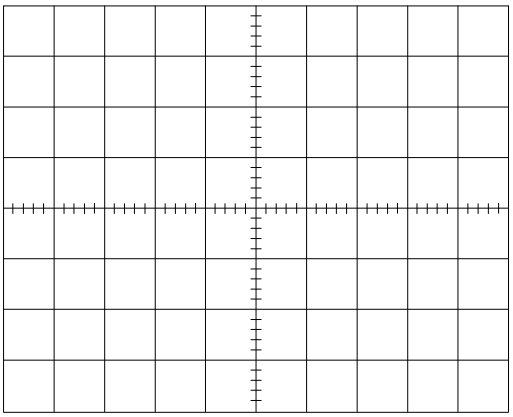
QA

QB

QC

b)





MAIN: a period of the OUT signal, on which the slope, which is chosen to be zoomed in, is bold. Mark the trigger moment on the figure !

WINDOW: detail : the chosen slope, zoomed as much as posible on the display

t_{rise} =

Trigger: level = Slope =