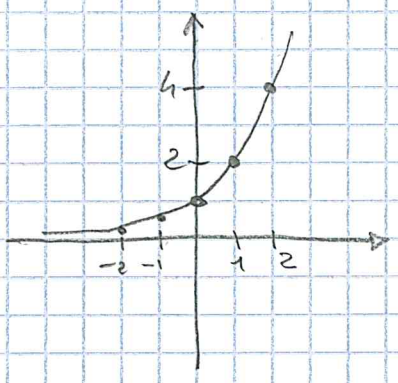


FUNZIONI ESPONENZIALE ; RAPPRESENTAZIONE GRAFICA

$f(x) = 2^x$

$D_f = \mathbb{R}$

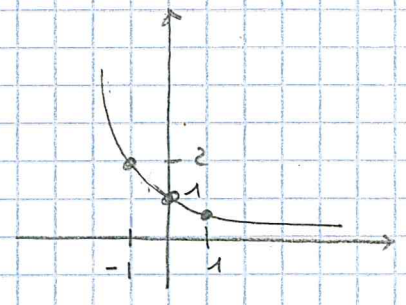
x	y
0	$2^0 = 1$
1	$2^1 = 2$
2	$2^2 = 4$
-1	$2^{-1} = \frac{1}{2}$
-2	$2^{-2} = \frac{1}{2^2} = \frac{1}{4}$



$f(x) = (\frac{1}{2})^x$

$D_f = \mathbb{R}$

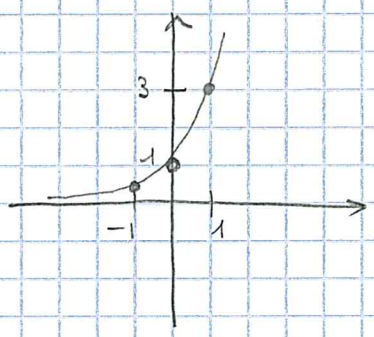
x	y
0	$(\frac{1}{2})^0 = 1$
1	$(\frac{1}{2})^1 = \frac{1}{2}$
-1	$(\frac{1}{2})^{-1} = 2$



$f(x) = 3^x$

$D_f = \mathbb{R}$

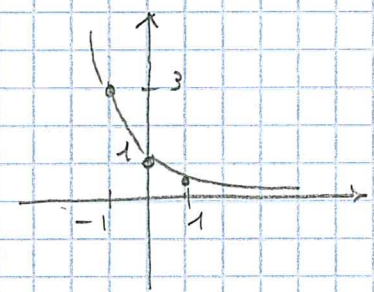
x	y
0	$3^0 = 1$
1	$3^1 = 3$
-1	$3^{-1} = \frac{1}{3}$



$f(x) = (\frac{1}{3})^x$

$D_f = \mathbb{R}$

x	y
0	$(\frac{1}{3})^0 = 1$
1	$(\frac{1}{3})^1 = \frac{1}{3}$
-1	$(\frac{1}{3})^{-1} = 3$

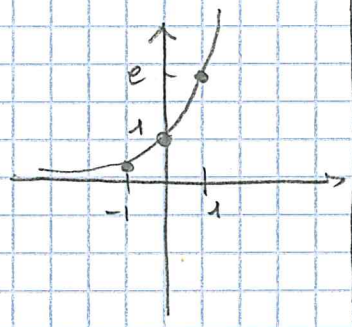


$f(x) = e^x$

NB = e = 2,7,.....
NUMERO
DI NEPERO

$D_f = \mathbb{R}$

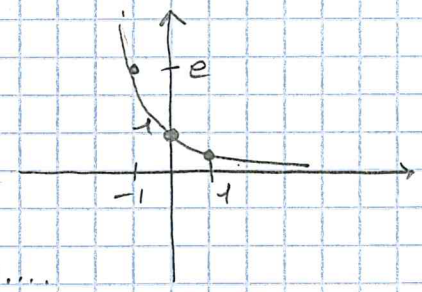
x	y
0	$e^0 = 1$
1	$e^1 = e = 2,7, \dots$
-1	$e^{-1} = \frac{1}{e} = 0, \dots$



$f(x) = (\frac{1}{e})^x$

$D_f = \mathbb{R}$

x	y
0	$(\frac{1}{e})^0 = 1$
1	$(\frac{1}{e})^1 = \frac{1}{e} = 0, \dots$
-1	$(\frac{1}{e})^{-1} = e = 2,7, \dots$

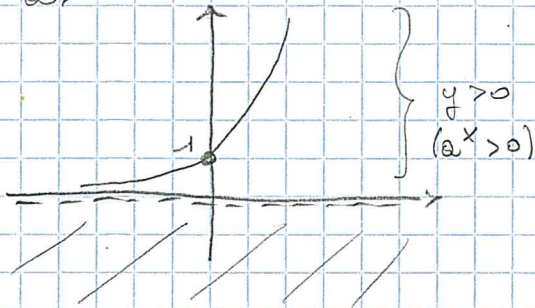


Amplasi ai generale la funzione esponenziale

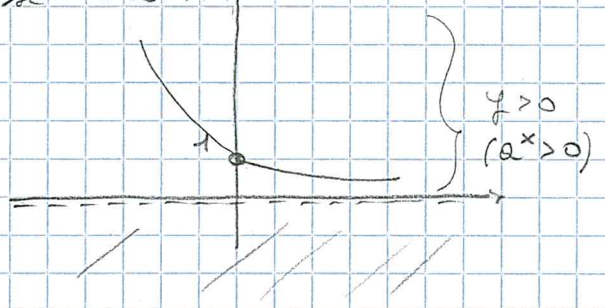
$$f(x) = a^x \quad \text{con } a > 0$$

$$D_f = \mathbb{R} \quad ; \quad \text{Im } f =]0, +\infty[\quad \text{cioe' } a^x > 0 \quad \text{per ogni } x \text{ reale}$$

se $a > 1$



se $0 < a < 1$



NB $a^0 = 1$