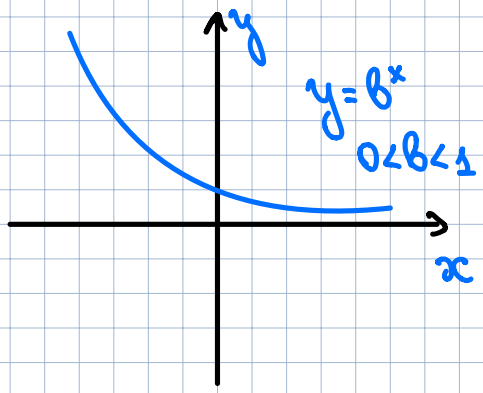
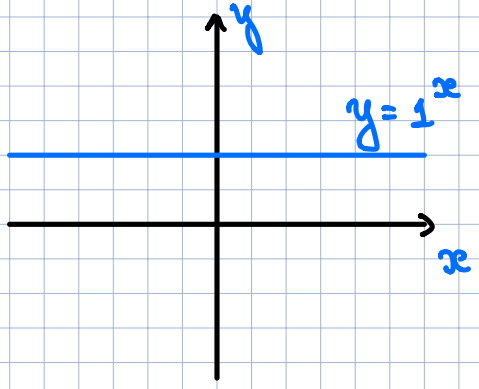
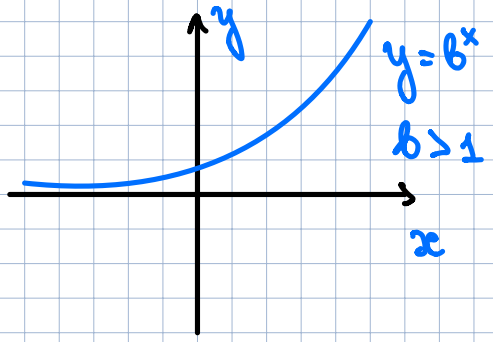
Section 1.4. Exponential functions

Def. An exponential function is a function of the form

$$f(x) = b^x, \quad b \text{ is a constant}, \quad b \geq 0$$







Laws of exponents

If a and b are positive numbers and x and y are any real numbers, then

1. $b^{x+y} = b^x \cdot b^y$
2. $b^{x-y} = \dfrac{b^x}{b^y}$
3. $(b^x)^y = b^{xy}$
4. $(ab)^x = a^x b^x$