Exercise 1.   Put under the plar form, the following complex numbers:

- $$z_1 = 2 + 3i$$

,

- $$z_2 = -3i$$

,

- $$z_3 = -\sqrt{6} - i\sqrt{2}$$

.

Exercise 2.   :

1. Find x and y such that
$$3x + 2i - ix + 5y = 7 + 5i. \tag{1}$$

2. Put under the form $x + iy$

   1.
   $$\frac{2+i}{3-2i}, \tag{2}$$

   2.
   $$(1+i)^n + (1-i)^n, \ n \in \mathbb{N}. \tag{3}$$

Exercise 3.   Resolve the following equations:

1.
$$z^3 = -1,$$

2.
$$z^2 = -8 + 6i.$$

Exercise 4.   Describe the following sets:

- $$A = \{z \in \mathbb{C} : |z + 1| \leq 1\} \tag{4}$$

- $$A = \{z \in \mathbb{C} : \frac{|z+1|}{|z-1|} = 1\} \tag{5}$$