

Exercise 3

In each case, find all the roots in rectangular coordinates, exhibit them as vertices of certain regular polygons, and identify the principal root:

$$(a) (-1)^{1/3}; \quad (b) 8^{1/6}.$$

$$\text{Ans. (b) } \pm\sqrt{2}, \pm\frac{1+\sqrt{3}i}{\sqrt{2}}, \pm\frac{1-\sqrt{3}i}{\sqrt{2}}.$$