

Exercise 2

In each case, find all the roots in rectangular coordinates, exhibit them as vertices of certain squares, and point out which is the principal root:

$$(a) (-16)^{1/4}; \quad (b) (-8 - 8\sqrt{3}i)^{1/4}.$$

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