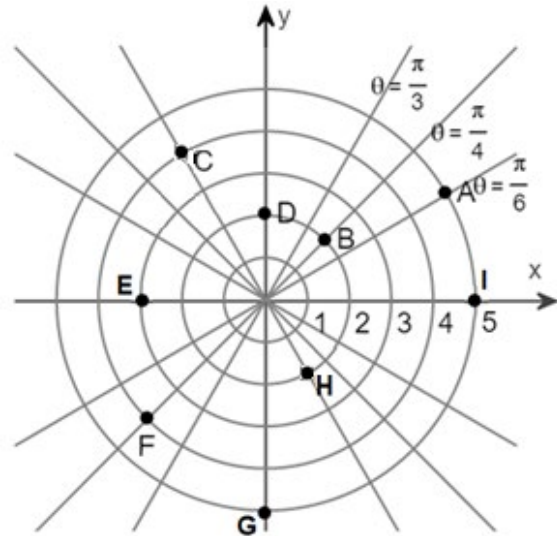
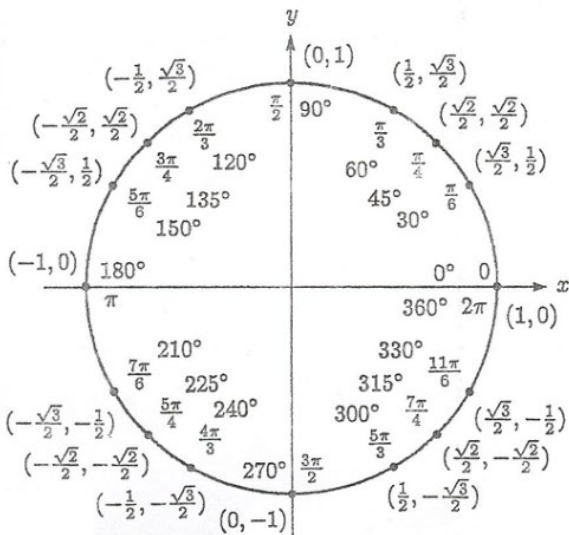


The Plot of a Complex Number z , Its Rectangular Form, Its Polar Form and More



1. Write a pair of polar coordinates (r, θ) and a pair of rectangular coordinates (x, y) for the points A through I. **Give exact values. Report θ in radians please.** Utilize the unit circle for efficiency. No trig function should be in your answer.
- (9) Only one polar coordinate (of your choice) need be reported.

A. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

B. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

C. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

D. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

E. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

F. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

G. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

H. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

I. $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ and $x = \underline{\hspace{1cm}}, y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

- (2) 2. Express in the polar coordinates. There are many correct answers. Only one is required. **Give exact values.** Report θ in radians please. Utilize the unit circle for efficiency. No trig function should be in your answer.

$x = -2, y = 2$ is $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$

$x = -\sqrt{2}, y = 0$ is $r = \underline{\hspace{1cm}}, \theta = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}i = \underline{\hspace{1cm}} \text{cis}(\underline{\hspace{1cm}})$