

Ques: How can we depict Euler's formula with the help of a graph?

Ans: For depicting Euler's formula with the help of a graph, we have to first draw non-intersecting lines to form a three-dimensional image of a Polyhedron on the graph paper. According to the graph theory stated by Euler, the sum of the number of dots of the figure and the number of regions the plain is cut into when reduced from the number of lines in the figure will give you two as the answer.

Ques: Using Euler's formula (Euler's identity), solve $e^{i x}$, where $a= 30$

Ans: We have Euler's formula,

$$e^{i x} = \cos x + i \sin x$$

Applying $x = a = 30$, we get,

$$e^{i 30} = \cos 30 + i \sin 30$$

$$e^{i 30} = \sqrt{3}/2 + i 0.5$$