

A Program to Calculate Points on a Parametric Curve

Given a parametric curve defined by the following equations:

$$x(t) = 3 \cos(t)$$

$$y(t) = 2 \sin(t)$$

The parameter t ranges from 0 to $\frac{\pi}{2}$.

Write a program in R that calculates and prints the coordinates of the curve points for different values of t (in equal divisions from 0 to $\frac{\pi}{2}$).

Description

Students are asked to calculate the coordinates $x(t)$ and $y(t)$ for each value of t . The parameter t should be divided into 10 equal segments, and the coordinates of the curve points should be calculated for each segment.

Output

Display the coordinates $(x(t), y(t))$ for 10 different points on the curve.

Notes

1. Commenting (providing brief explanations of the code) will be considered as part of the evaluation.