MATHS

BOOKS - INDEPENDENTLY PUBLISHED MATHS (ENGLISH)

PARAMETRIC EQUATIONS

Example

1. Graph the parametric euation $\begin{cases} x = 3t + 4 \\ y = t - 5 \end{cases}$

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2. $\begin{cases} x = t^2 \\ y = 3t^2 + 1 \end{cases}$ Eliminate the parameter and sketch the graph

3. Sketch the graph of the parametric equation

$$\begin{cases} x = 4\cos\theta \\ y = 3\sin\theta \end{cases}$$

1. In the graph of the parametric equation

$$\begin{cases} x = t^2 + t \\ y = t^2 - t \end{cases}$$

A. $x \geq 0$

B. $x \geq -\dfrac{1}{4}$

C. x is any real number

D. $x \geq -1$

Answer: b

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2. The graph of $\begin{cases} x = \sin^2 t \\ y = 2\cos t \end{cases}$

A. straight line

B. line segment

C. parabola

D. portion of a parabola

Answer: d

3. Which of the following is (are) a pair of parametric equation that represent a circle?

$$\begin{cases} x = \sin\theta \\ y = \cos\theta \end{cases}$$

$$\begin{cases} x = t \\ y = \sqrt{1 - t^2} \end{cases}$$

$$\begin{cases} x = \sqrt{s} \\ y = \sqrt{1 - s} \end{cases}$$

A. only I

B. only II

C. only III

D. only II and III

Answer: a

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