Interlude 1: Exercise 1

Explanation
This is a straightforward exercise in plotting points in a coordinate system. In the first edition, the last formula should read \( x(t) = \sin^2 t - \cos t \).

Hint
Begin by entering the formula into your graphing system. Then set the range of the graphing.

Answer
- \[ f(t) = t^4 + 3 t^3 - 12 t^2 + t - 6 \]
In Mathematica we write,
\[ f(t) = t^4 + 3t^3 - 12t^2 + t - 6 \]

- \( g(x) = \sin x - \cos x \)

- \( \theta(\alpha) = e^\alpha + \alpha \ln \alpha \)
- $x(t) = \sin^2 t + \cos t$

Plot[$\sin[t]^2 + \cos[t], \{t, 0, 2 \pi\}, \text{AxesLabel} \to \{t, x[t]\}$]