Pontificia Universidad Javeriana

Matemáticas Para Biologia I

2024-09-30

Observe las siguientes gráficas de funciones polinomiales, haga el bosquejo de la primera y segunda derivada de cada una de ellas y determine los puntos críticos de cada función, máximos, mínimos y puntos de inflexión.

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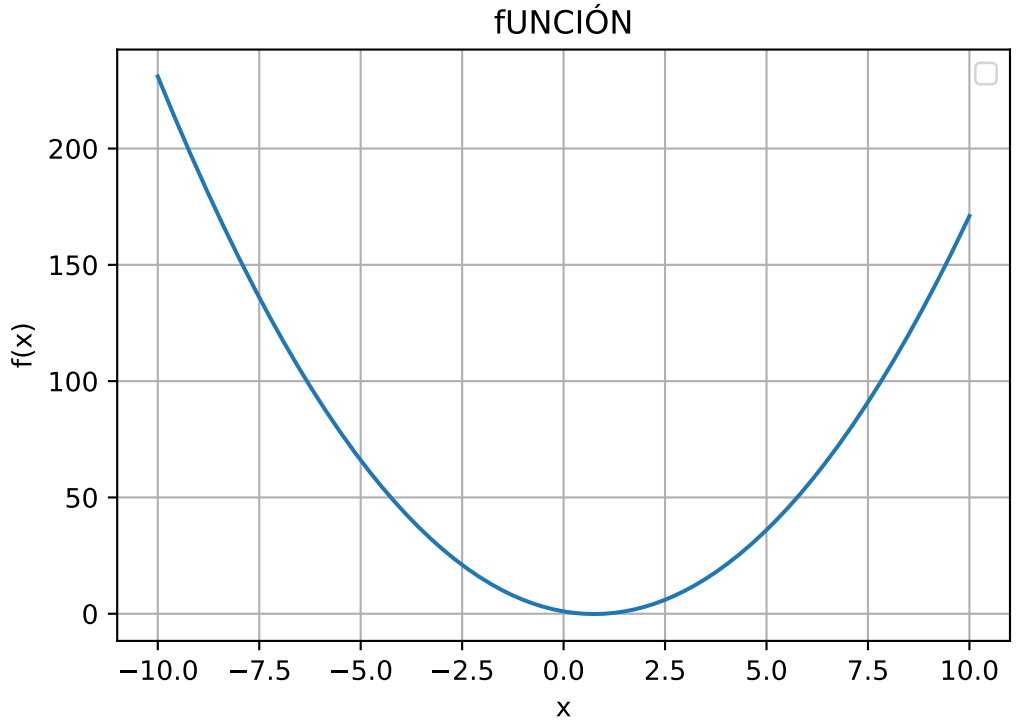


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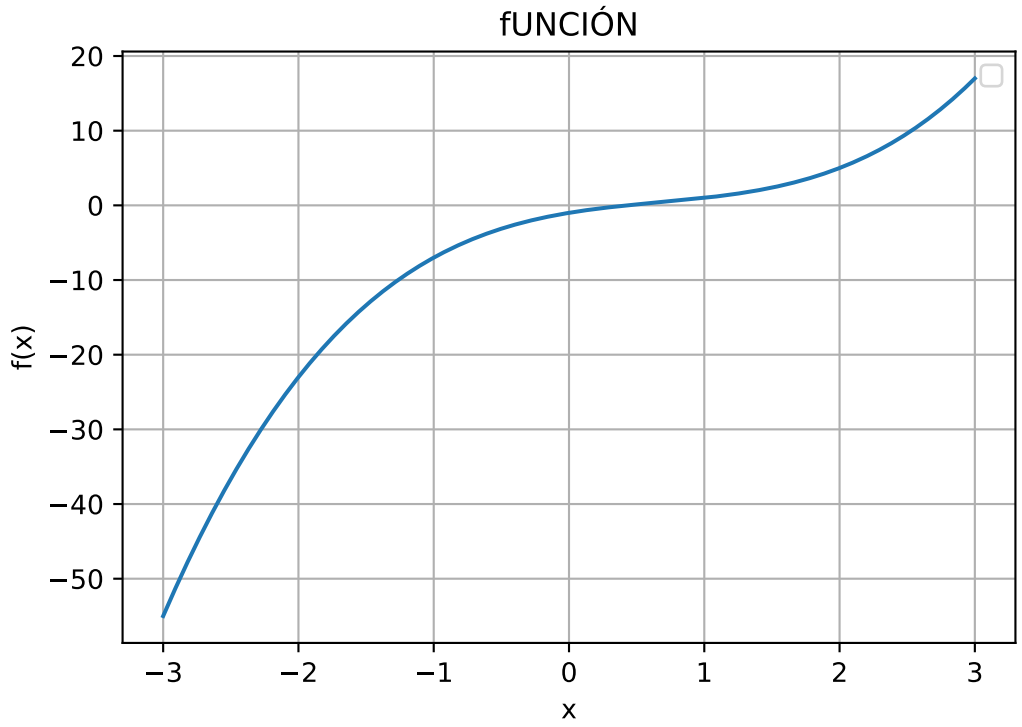


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/tmp/ipykernel_7681/1624023454.py:6: RuntimeWarning: invalid value encountered in power
  return x**(1/3)
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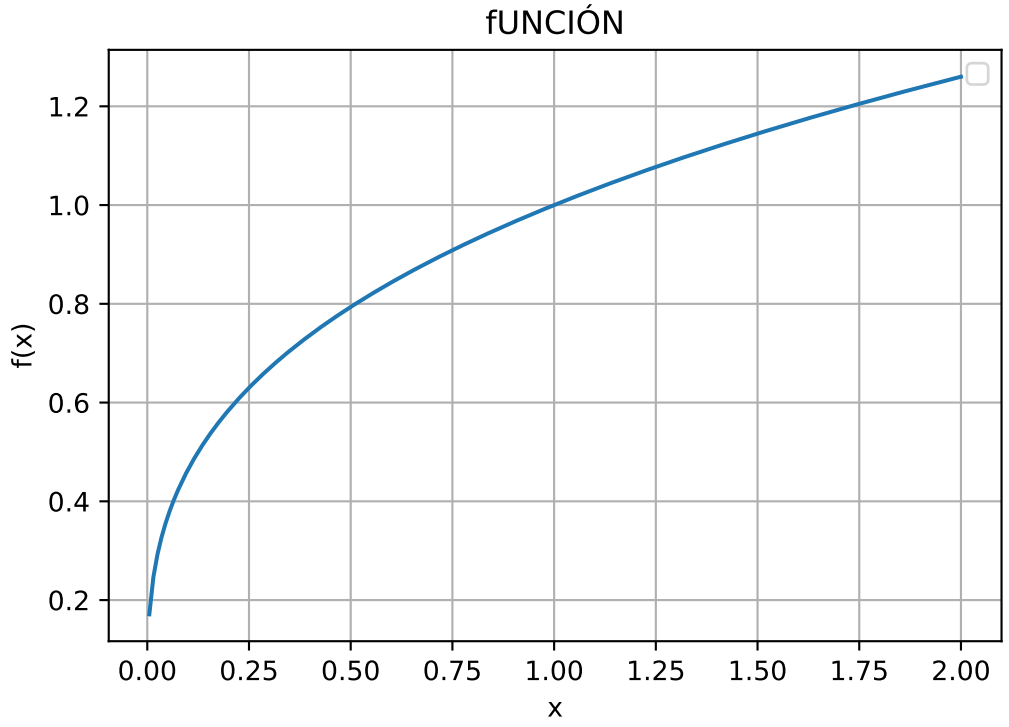


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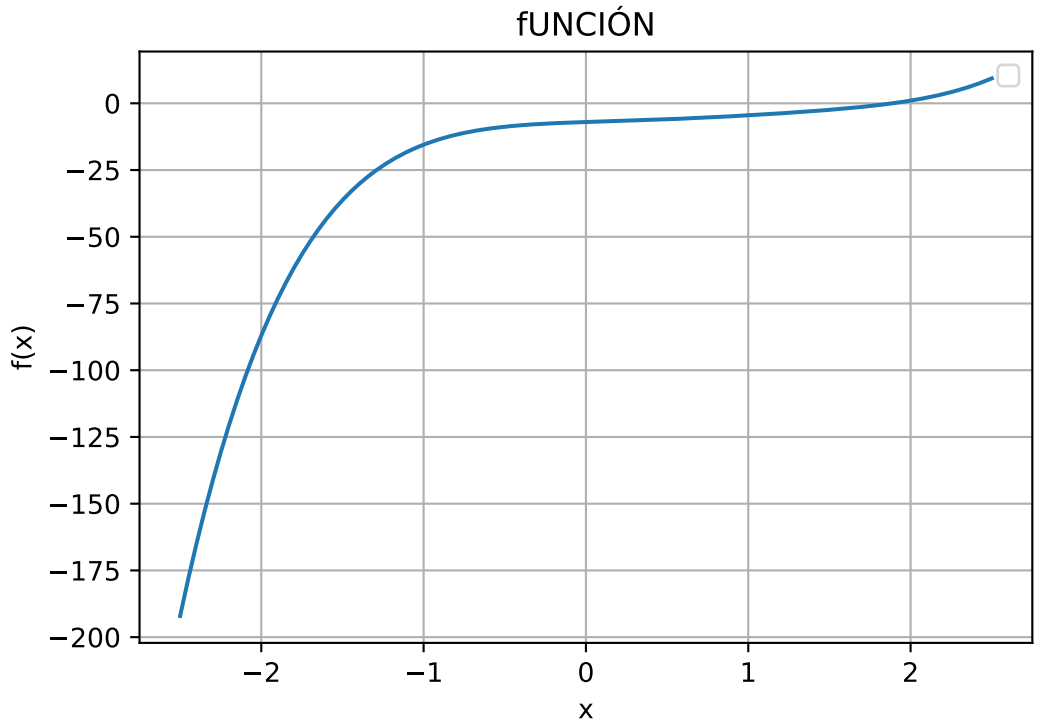


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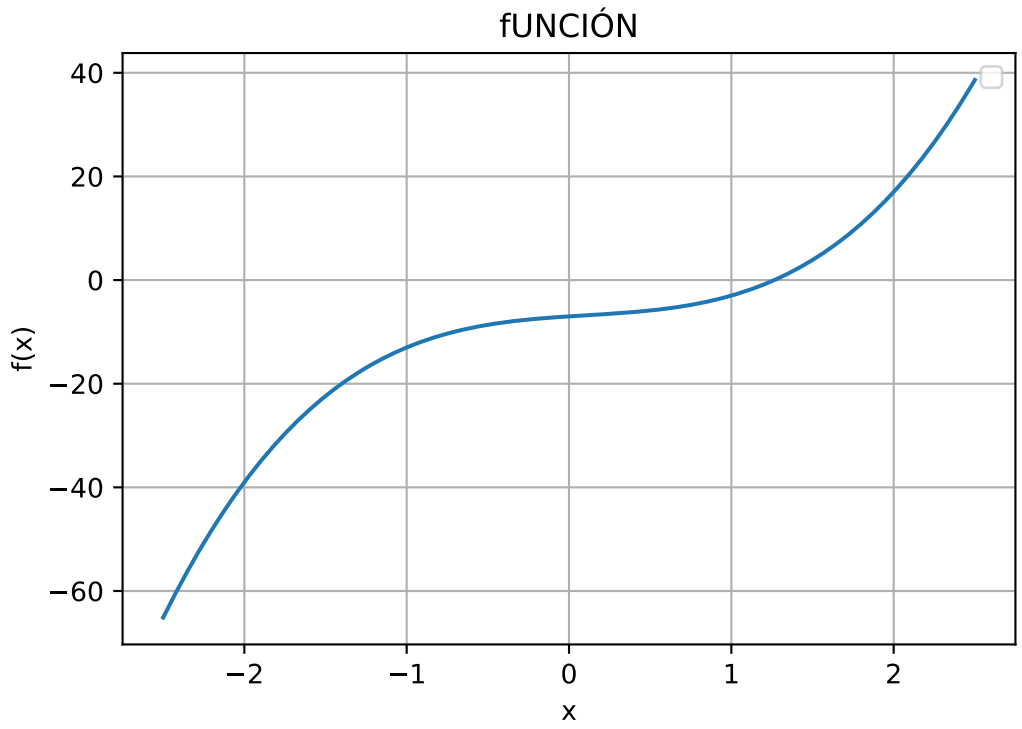

2. En cada una de las siguientes funciones, encuentre la función derivada, e igualando a cero determine los puntos críticos. ahora encuentre la segunda derivada y determine si los puntos críticos son máximos, mínimos o puntos de inflexión.

a. $f(x) = 2x^2 - 3x + 1$

b. $f(x) = x^3 - 2x^2 + 3x - 1$

c. $f(x) = -4x^3 - 3x^2 + 2x + 5$

d. $f(x) = -3x^3 - x^2 + 2x - 7$