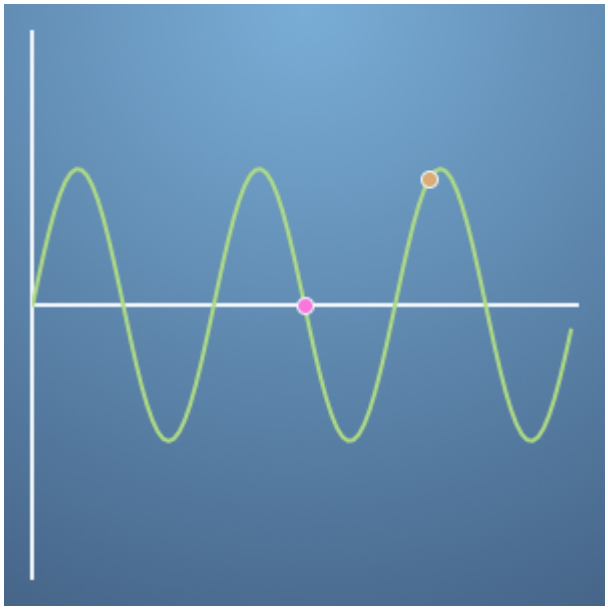
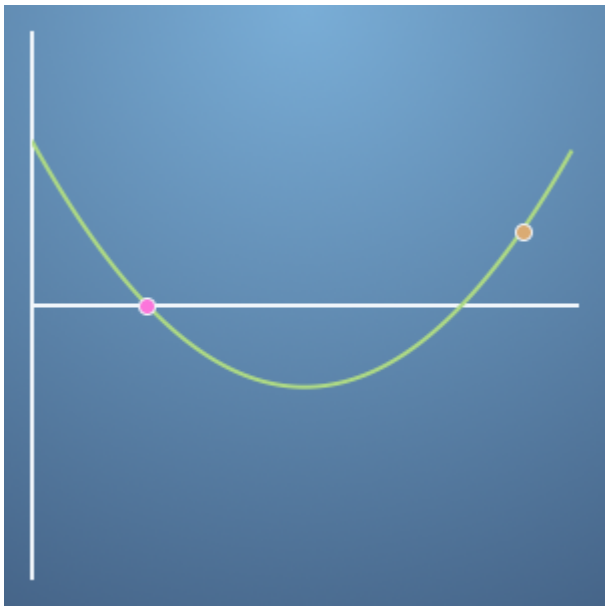
1. Given the following functions. When applying the Newton-Raphson method, which ones will converge to the specified root (pink dot) from the given starting point (orange dot)?

2.5 / 5 puntos

Select all that apply.

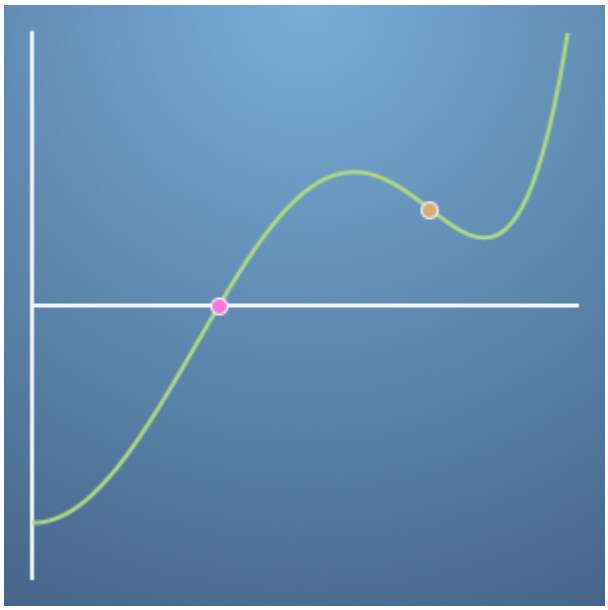
☐ 

$$$$

☑ 

$$$$

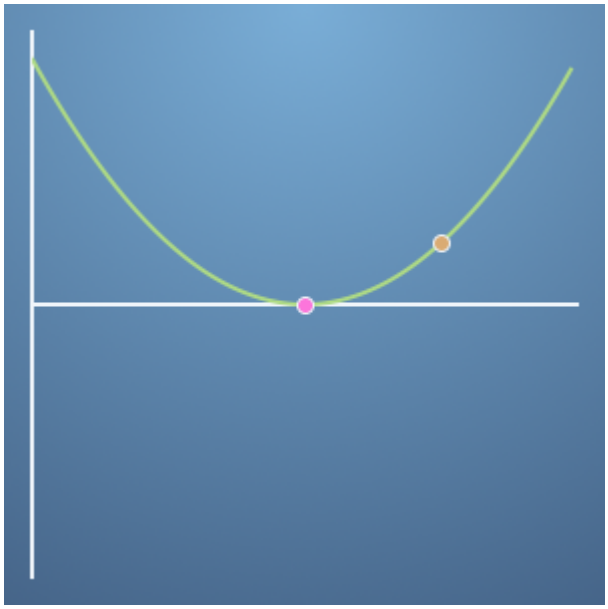
⊗ **Esto no debería estar seleccionado**
This system will converge, but not to the correct root.



$$$$

Esto no debería estar seleccionado

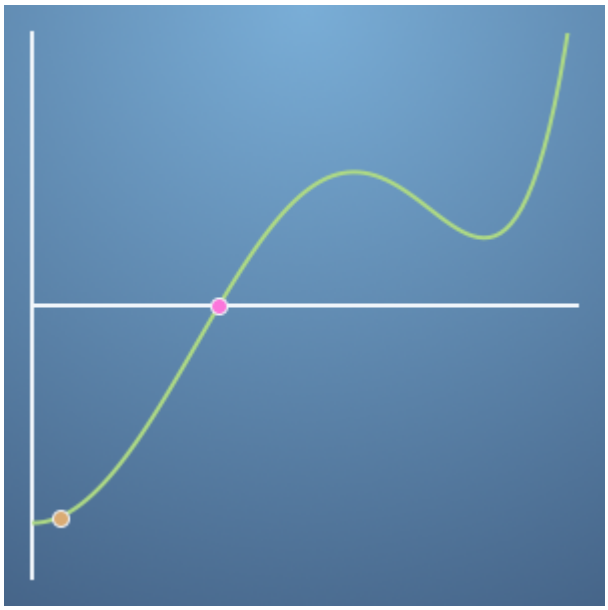
This system may not converge as it is likely to get trapped and oscillate about the minimum that it is sitting in.



$$$$

Correcto

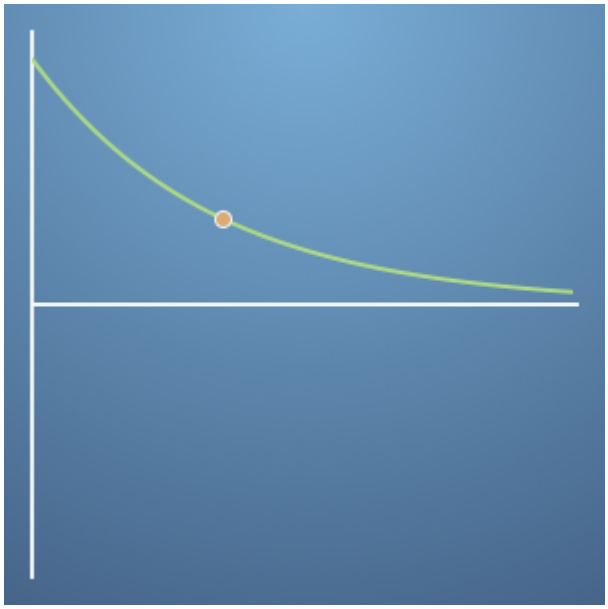
This optimisation will converge to the root, even though it is a minimum.



$$$$

Esto no debería estar seleccionado

This starting point will throw the starting guess into the basin of the minimum, where it will oscillate in without converging.



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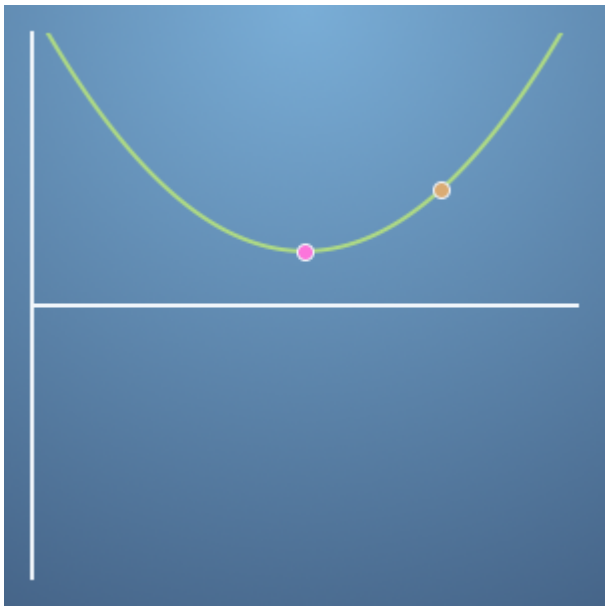

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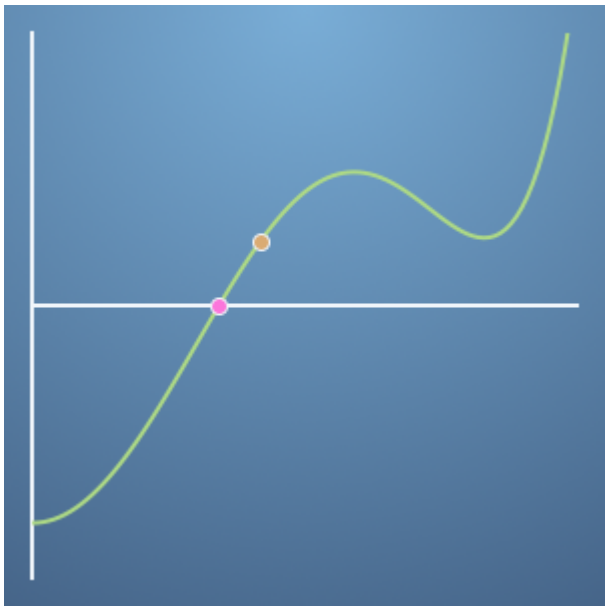
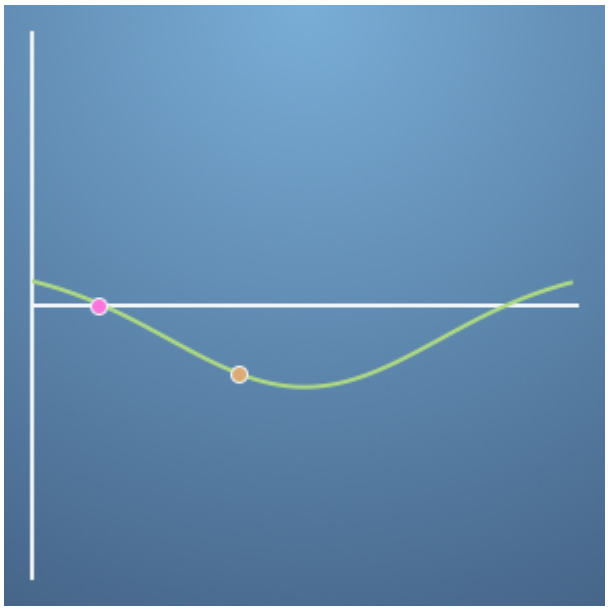


$$$$

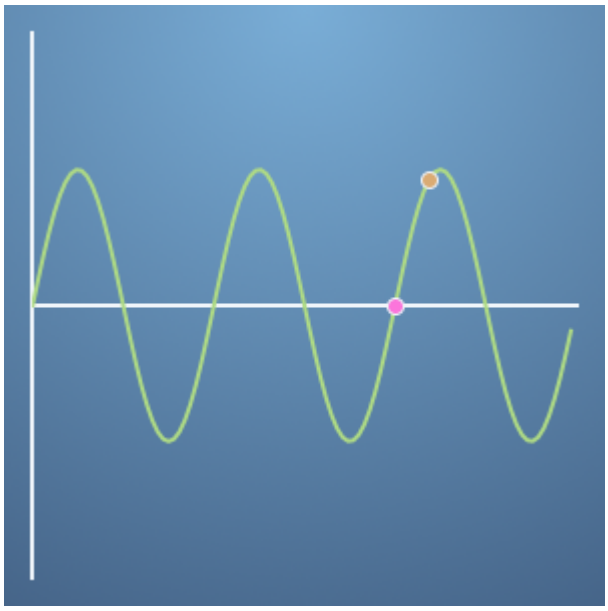
Correcto

This optimisation will converge to the specified root.



$$$$

Correcto
This optimisation will converge to the specified root.



$$$$

Esto no debería estar seleccionado
This system will converge, but not to the nearby root. The gradient is shallow at the starting point, so the iteration will shoot into a different basin.