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| --- | --- | --- |
|  | {{method}} |  |
| * Problem Statement | For the following function : | |
| * Requirements | Use the False position method in interval [{{xl1}}, {{xu1}}] to find the root of the equation for {{iteration}} iterations or until the approximate error < {{ approximate}} | |
| * Solution: The formula of the false-position method is:   For the first iteration the initial guesses interval {{xl1}}, {{xu1}}    {{ea1}}  The 1st iteration doesn’t have either nor , as there isn’t a previous approximation.  {{xl1}} {{fxl1}}  {{xr1}}{{fxr1}}  Since {{multi1}} {{operator1}} then {{newX1}} {{xr1}}.  For the second iteration the initial guesses interval {{xl2}}, {{xu2}}    {{ea2}}  {{xl2}} {{fxl2}}  {{xr2}}{{fxr2}}  Since {{multi1}} {{operator2}} then {{newX2}} {{xr2}}.  For the third iteration the initial guesses interval {{xl3}}, {{xu3}}      {{ea3}}  {{xl3}} {{fxl3}}  {{xr3}}{{fxr3}}  Since {{multi1}} {{operator3}} then {{newX3}} {{xr3}}.  Then, the root of the function after achieving the required conditions is :  {{x\_last}}  And so on for the rest iterations until reaching a termination condition, as the following table: | | |
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