sandipan\_dey 🗸

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★ Course / 3 Finger Exercises (FE) / 3.5 Finger Exercises 3 (FE3)



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**Discussions** 

Finger Exercises 3 due Aug 17, 2023 05:00 IST Completed All posts sorted by recent activity Problem: Convergence of Newton's method 1/1 point (graded) MO2.10 You can find an approximation to  $\sqrt{2}$  by running Newton's method to find the root of the function  $r\left( x
ight) =x^{2}-2$ . Initialize the iteration with  $oldsymbol{x}^0=\mathbf{1}$  . What value  $oldsymbol{x}$  do you obtain after two iterations of Newton's method (i.e. k=2)? Enter the value to four decimal places (1.WXYZ). 1.4167 ✓ Answer: 1.4167 Submit Answers are displayed within the problem Problem: A different initial guess © All Rights Reserved 1/1 point (graded)  $oldsymbol{eo}$  pose that you choose  $oldsymbol{x^0} = -1$ . What happens?  $\bigcirc$  Convergence to  $\sqrt{2}$ edX  $\sqrt{2}$ Convergence to  $-\sqrt{2}$ Affiliates ed for in the sign of the sign Open edX Caree Error, division by zero <u>News</u> Legal Terms of Service & Honor Code Privacy Policy <u>Accessibility Policy</u> Problem: And another initial guess Sitemap 1/1 point (graded) Cookie Policy Now suppose that you choose  $x^0=0$ . What happens? Your Privacy Choices Convergence to  $\sqrt{2}$ Idea Hub nvergence to  $-\sqrt{2}$ Contact Us Help Centergence (i.e. no convergence) <u>Security</u> Media Kitor, division by zero











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