

Unit 01: Basic Tools of Optimization in Economics

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1. Unit 01: Basic Tools of Optimization in Economics

4. Chapter: Unit 01: Basic Tools of Optimization in Economics

1. Unit 01: Basic Tools of Optimization in Economics Questions

4.1.1. Given this function, $x^{-(1/5)}$, what is the first derivative?

Author: Tony Pizur

Given this function, $x^{-(1/5)}$, what is the first derivative?

Please choose only one answer:

- $9x^{-(1/5)}$
- $9x^{+(1/5)}$
- $-9x^{-(1/5)}$
- $-9x^{+(1/5)}$

Check the answer of this question online at QuizOver.com:

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4.1.2. Suppose a person starts at position $x=1$. Assume that the person's n...

Author: Tony Pizur

Suppose a person starts at position $x=1$. Assume that the person's next discrete choice on a decision tree is to either move to $x=0$ or $x=2$ and the results of that choice are governed by the equation, x^3-3x+3 . What is the correct choice and associated economic justification?

Please choose only one answer:

- Move to 0 because $f'(2) > f'(0)$ and $f'(1)=0$ and $f'(x) > 0$ for $x \in [0,2]$.
- Move to 0 because $|f'(2)| > |f'(0)|$ and $f'(1)=0$ and $f'(x) < 0$ for $x \in [0,2]$.
- Move to 2 because $|f'(2)| > |f'(0)|$ and $f'(1)=0$ and $f'(x) > 0$ for $x \in [0,2]$.
- Move to 2 because $f'(2) < f'(0)$ and $f'(1)=0$ and $f'(x) > 0$ for $x \in [0,2]$.

Check the answer of this question online at QuizOver.com:

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4.1.3. Given this function, $x^2 - (1/5)x$, what is the second derivative?

Author: Tony Pizur

Given this function, $x^2 - (1/5)x$, what is the second derivative?

Please choose only one answer:

- $20x^3 - (1/5)$
- $(5/4)x^3$
- $5x^2$
- $20x^3$

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$x - 1/5 x\$ what is the Tony Pizur @Regis Math](http://www.quizover.com/question/given-this-function-x-1-5-x-what-is-the-tony-pizur-regis-math-2625292?pdf=3044)

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4.1.4. Given this function, x^2-5x , what is the maximum value for $x \in \pm 1.5$?

Author: Tony Pizur

Given this function, x^2-5x , what is the maximum value for $x \in \pm 1.5$?

Please choose only one answer:

- -4
- 0
- +4
- EMPTY

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$x^2-5x\$ what is the maximum Tony Pizur @Regis Math](#)

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4.1.5. Given this function, x^2-5x , what is the minimum value for $x \in \mathbb{R}$?

Author: Tony Pizur

Given this function, x^2-5x , what is the minimum value for $x \in \mathbb{R}$?

Please choose only one answer:

- -4
- 0
- +4
- EMPTY

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$x^2-5x\$ what is the minimum Tony Pizur @Regis Math](#)

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4.1.6. Given this function, x^2-5x , what is the maximum value for all value...

Author: Tony Pizur

Given this function, x^2-5x , what is the maximum value for all values of x ?

Please choose only one answer:

- -4
- 0
- +4
- EMPTY

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$x^2-5x\$ what is the maximum Tony Pizur @Regis Math](#)

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4.1.7. Given this function, x^2-5x , what is the minimum value for all value...

Author: Tony Pizur

Given this function, x^2-5x , what is the minimum value for all values of x ?

Please choose only one answer:

- -4
- 0
- +4
- EMPTY

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$x^2-5x\$ what is the minimum Tony Pizur @Regis Math](#)

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4.1.8. Given this function, $\ln(x^3)+y^2+x^{(0.5)}$, what is the derivative with...

Author: Tony Pizur

Given this function, $\ln(x^3)+y^2+x^{(0.5)}$, what is the derivative with respect to x?

Please choose only one answer:

- $-(0.5)/(x^{(0.5)})+(3/x)+2y$
- $(0.5)/(x^{(0.5)})+(3/x)$
- $(0.5)/(x^{(0.5)})-(3/x)$
- $3\ln(x^2)+(0.5)/(x^{(0.5)})$

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$\ln x y x 0.5\$ what is the Tony Pizur @Regis Math](#)

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4.1.9. Given this function, $\ln(x^3)+y^2+x^{(0.5)}$, what is the double derivati...

Author: Tony Pizur

Given this function, $\ln(x^3)+y^2+x^{(0.5)}$, what is the double derivative with respect to x?

Please choose only one answer:

- $(-4x^{(1.5)})^{(-1)}-3x^{(-2)}$
- $1/(4x^{(1.5)})-3/(x^2)$
- $6\ln(x)+1/(4x^{(1.5)})$
- $-1/(4x^{(1.5)})-3/(x^2)+2$

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$\ln x y x 0.5\$ what is the Tony Pizur @Regis Math](#)

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4.1.10. Given this function, $f(x)=x^3-3x+3$, for what values of x is there a ...

Author: Tony Pizur

Given this function, $f(x)=x^3-3x+3$, for what values of x is there a local maximum and minimum?

Please choose only one answer:

- (-2,0)
- (-1,1)
- (-2,2)
- There is none; there are only global maxima and minima.

Check the answer of this question online at QuizOver.com:

Question: [Given this function \$f\(x\)=x^3-3x+3\$ for what values of \$x\$ is there a local maximum and minimum? Tony @Regis Math](#)

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