

Basic elementary functions



You will draw graphs and estimate analytical formulas from the graphs.

- **Ful screen** button or **CTRL L** switches between window and Full Screen mode.
- **Start** button gives you a random problem.
- **Hint** button shows you a hint.
- **Solution** button shows you a solution.
- **Next question** button shows another random problem.
- **Home** button moves here.

The following functions are used in the problems in this file: x^n , \sqrt{x} , $\frac{1}{x}$, $\ln x$, e^x , $\sin x$, $\cos x$ and functions obtained by resizing and moving these functions.

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Start

Full Screen

Close

Home

Question

Graph the function $y = 1 - x^2$.



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Hint

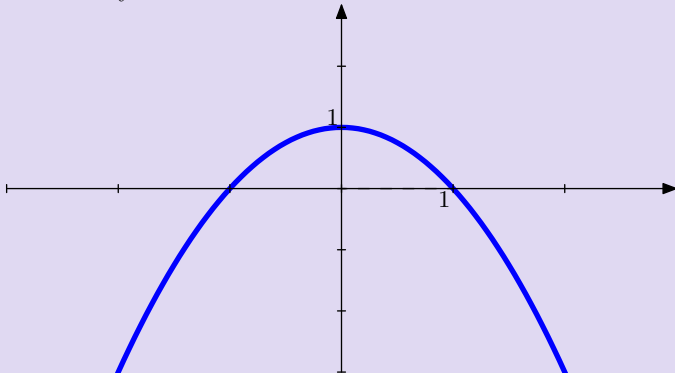
Solution

Next question

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Question

Find analytical formula for the function.



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Hint

Solution

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Question

Graph the function $y = -1 - x^2$.



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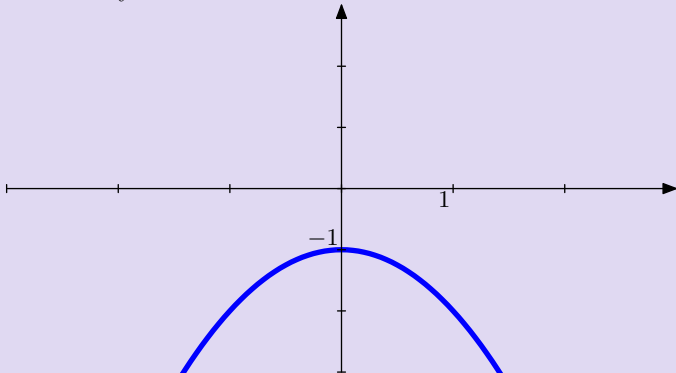
Solution

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = x^2 - 1$.



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Hint

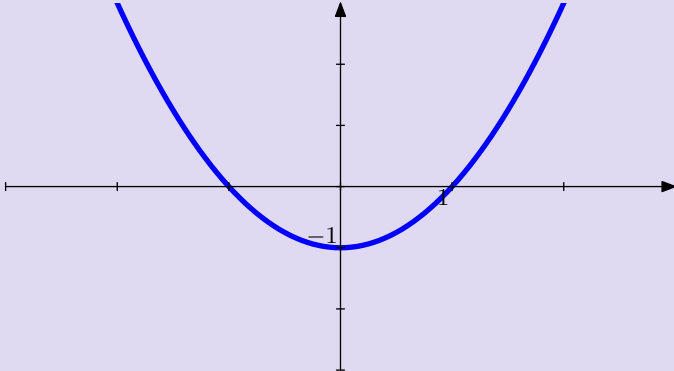
Solution

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Question

Find analytical formula for the function.



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Hint

Solution

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Question

Graph the function $y = (x - 1)^2$.



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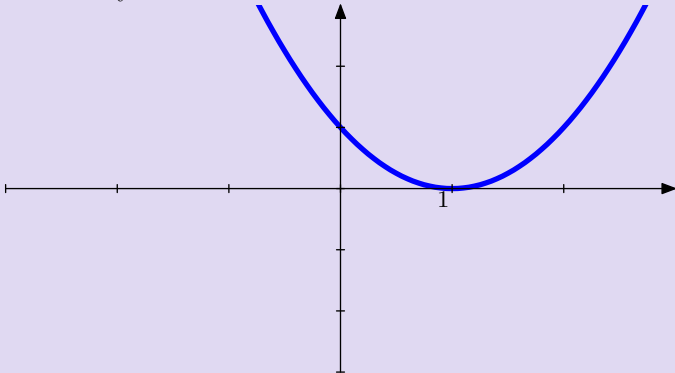
Solution

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = x^3 + 2$.



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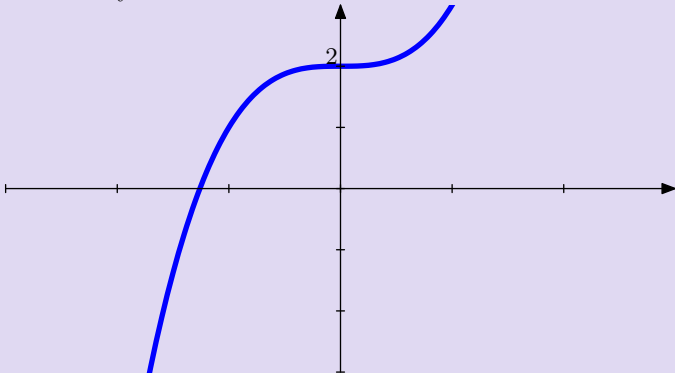
Solution

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Question

Find analytical formula for the function.



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Question

Graph the function $y = (x + 1)^3 + 2$.



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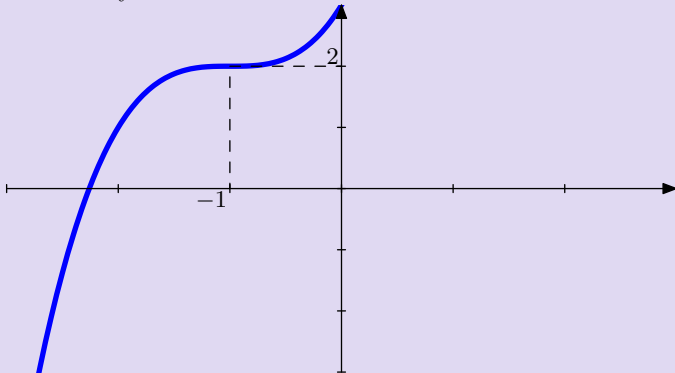
[Solution](#)

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Question

Find analytical formula for the function.



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Question

Graph the function $y = (x + 2)^3$.



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Hint

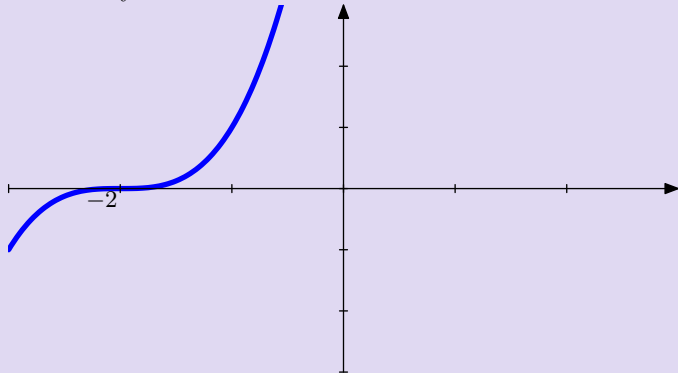
Solution

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Question

Find analytical formula for the function.



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Home

Question

Graph the function $y = 1 - (x + 2)^3$.



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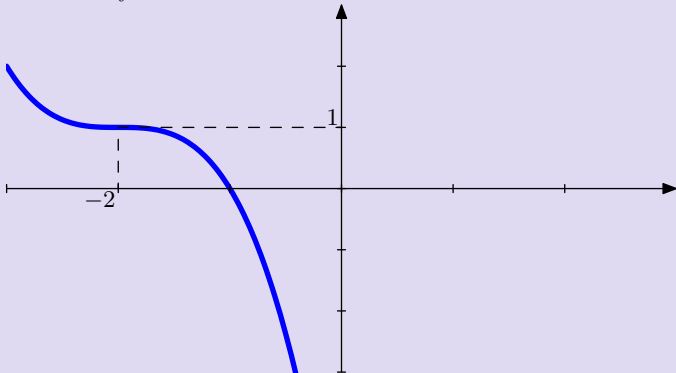
Solution

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Find analytical formula for the function.



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Question

Graph the function $y = 1 - e^x$.



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Solution

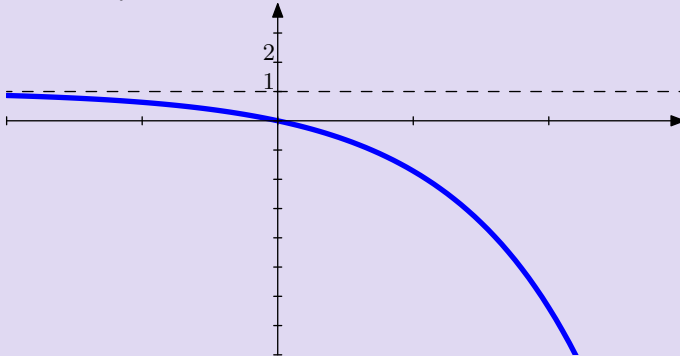
Next question

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Question

Find analytical formula for the function.



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Question

Graph the function $y = 3 - e^{-x}$.



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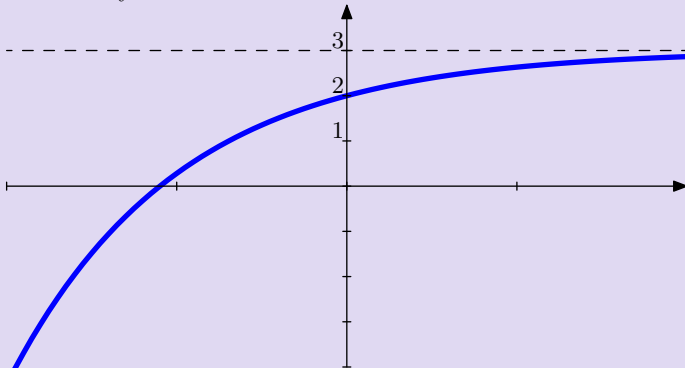
Solution

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = 1 + e^{-x}$.



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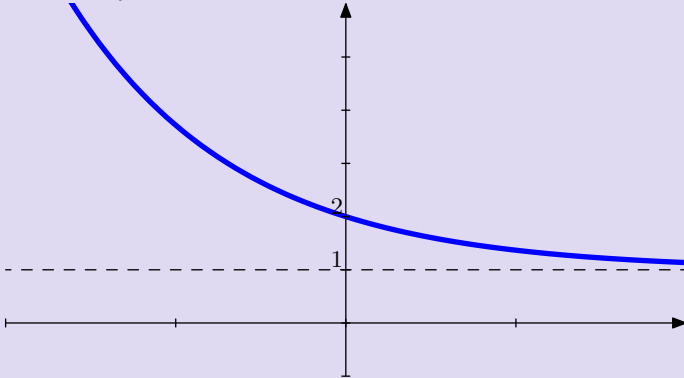
Solution

Next question

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Question

Find analytical formula for the function.



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Hint

Solution

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Question

Graph the function $y = e^x - 1$.



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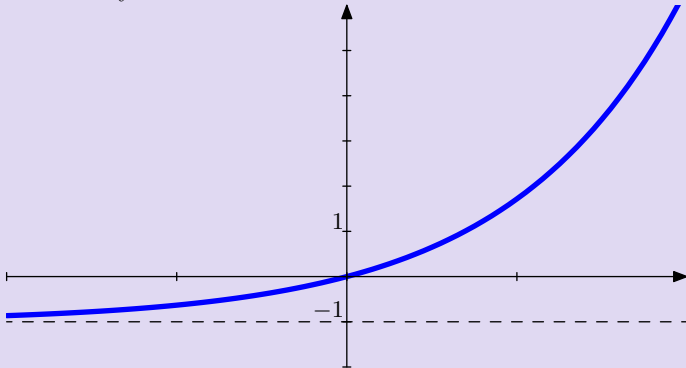
Solution

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Find analytical formula for the function.



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Question

Graph the function $y = e^{-x} - 1$.



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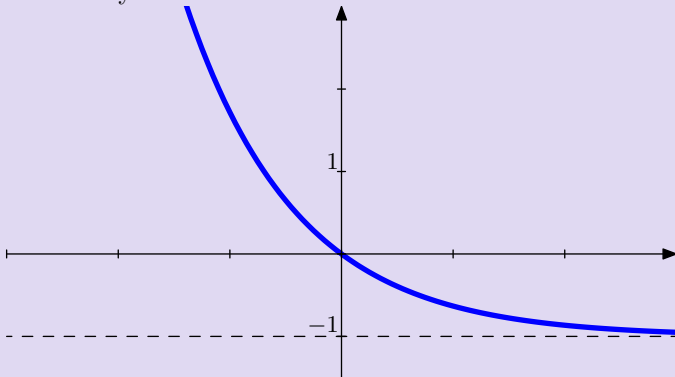
Solution

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = e^{-x} + 1$.



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Solution

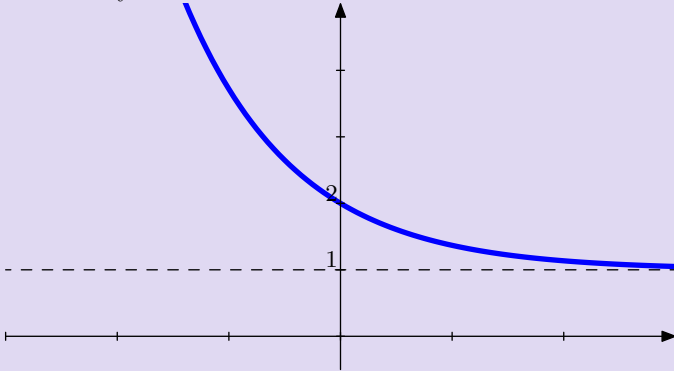
Next question

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = 2 - e^x$.



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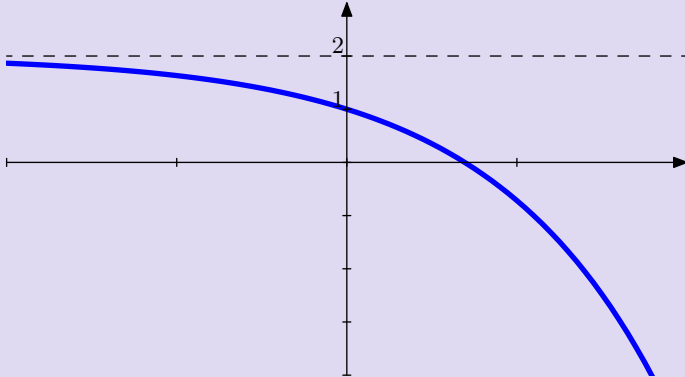
Solution

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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = 1 + \sqrt{x - 3}$.



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Solution

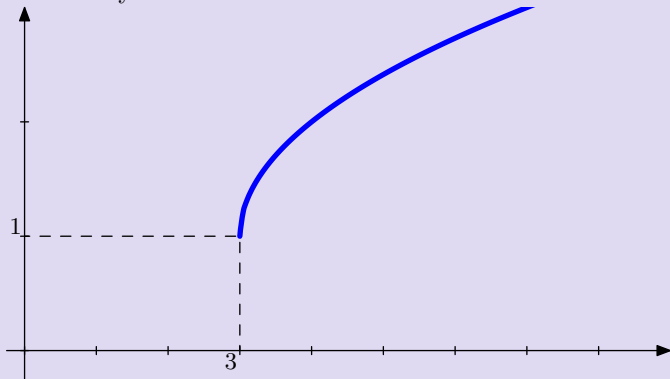
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Question

Find analytical formula for the function.



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Question

Graph the function $y = 2 - \sqrt{x - 3}$.



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Hint

Solution

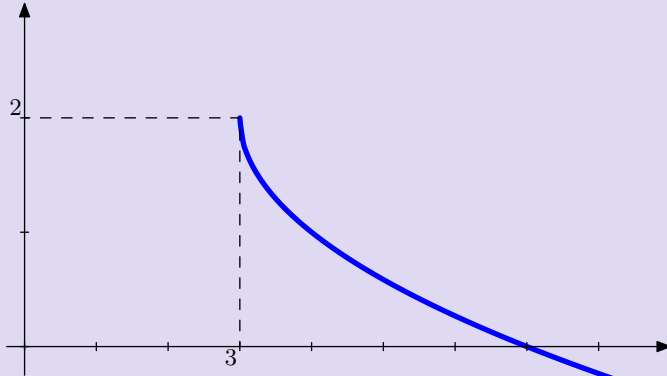
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Find analytical formula for the function.



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Solution

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Question

Graph the function $y = \frac{1}{x+2} + 1$.



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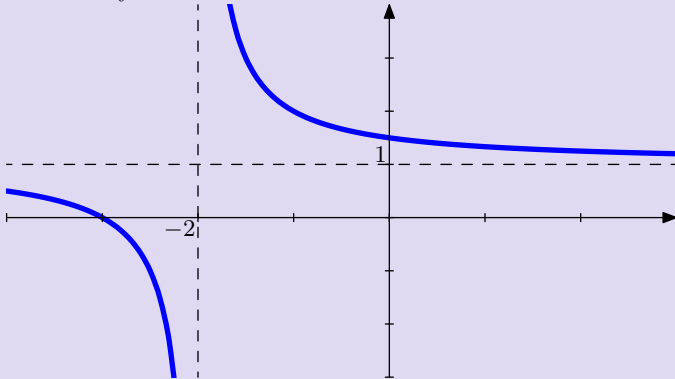
Solution

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Find analytical formula for the function.



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Question

Graph the function $y = \ln(x + 2)$.



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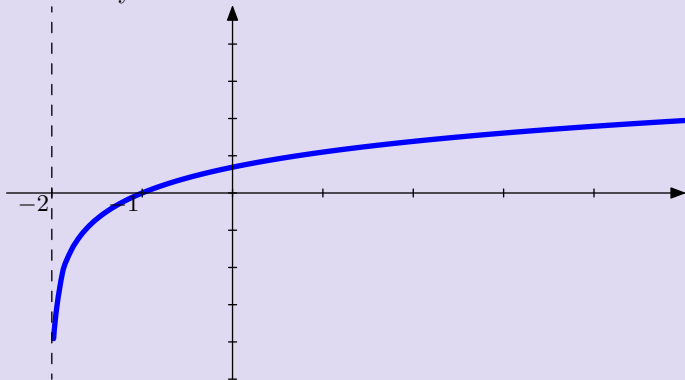
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Question

Find analytical formula for the function.



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Question

Graph the function $y = 1 - \ln(x + 2)$.



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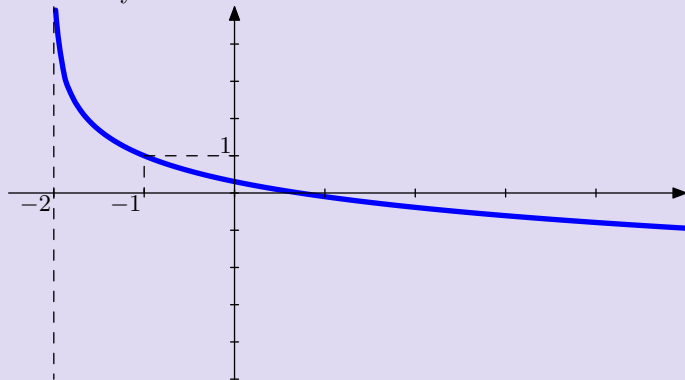
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Find analytical formula for the function.



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Question

Graph the function $y = 1 - \frac{2}{x}$.



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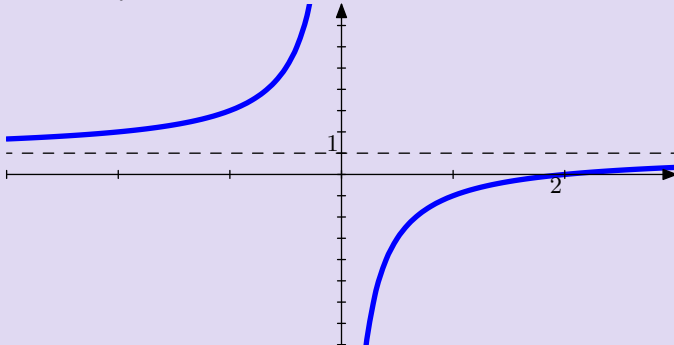
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Find analytical formula for the function.



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Question

Graph the function $y = 1 - (x + 1)^2$.



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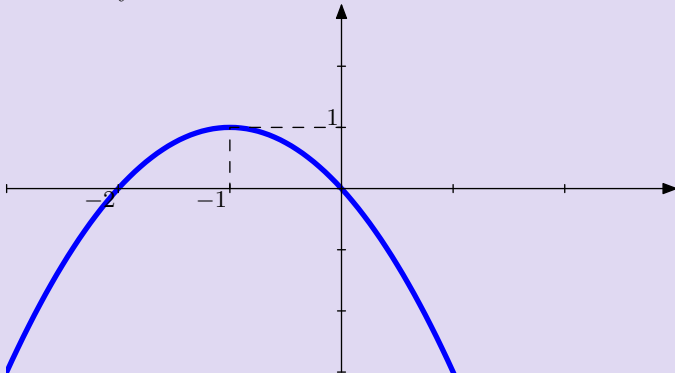
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Find analytical formula for the function.



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Question

Graph the function $y = (x - 1)^2 - 1$.



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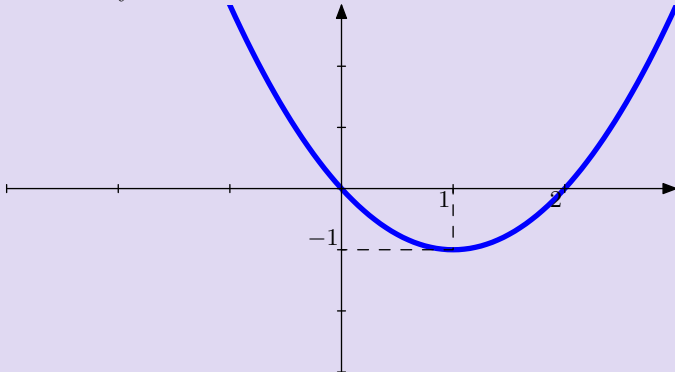
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Find analytical formula for the function.



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Question

Graph the function $y = 1 - (x + 1)^3$.



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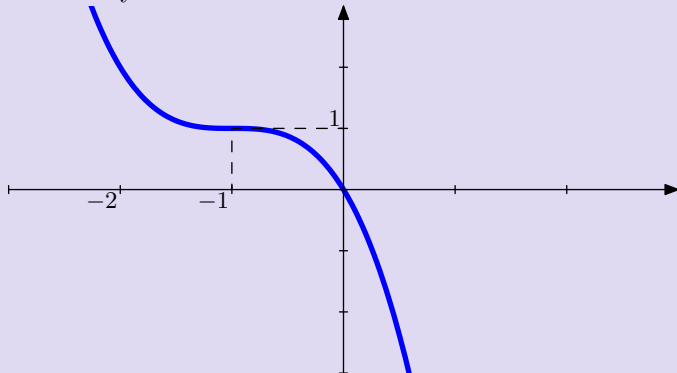
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Find analytical formula for the function.



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Question

Graph the function $y = (x - 1)^3 - 1$.



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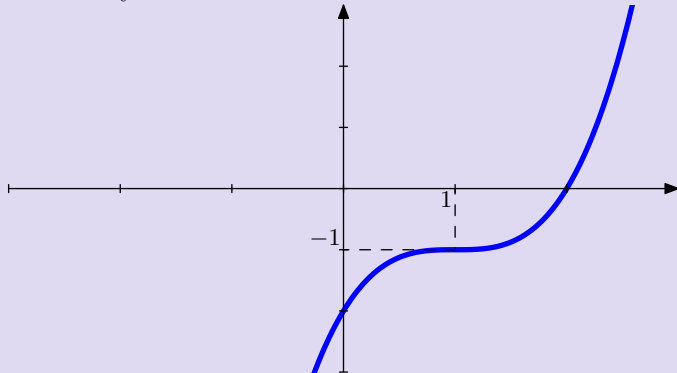
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Find analytical formula for the function.



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Question

Graph the function $y = x^3 - 1$.



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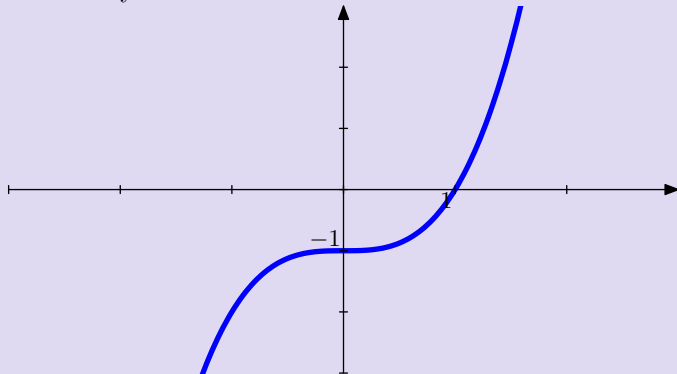
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Question

Find analytical formula for the function.



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Question

Graph the function $y = (x - 1)^2$.



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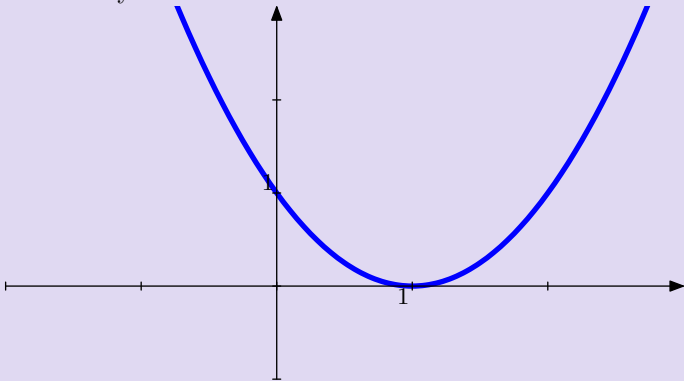
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Find analytical formula for the function.



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Question

Graph the function $y = x^3 - 1$.



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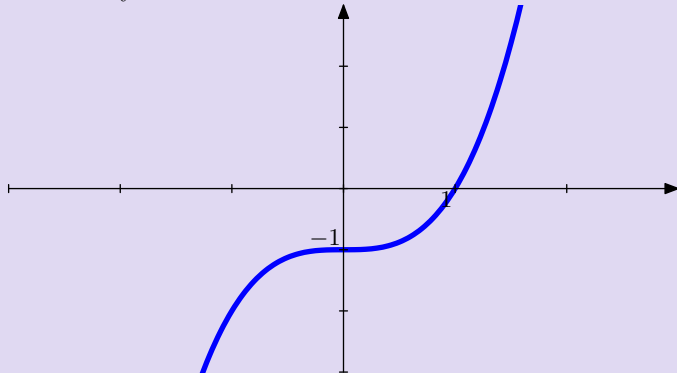
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Find analytical formula for the function.



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Question

Graph the function $y = (x + 1)^3 - 2$.



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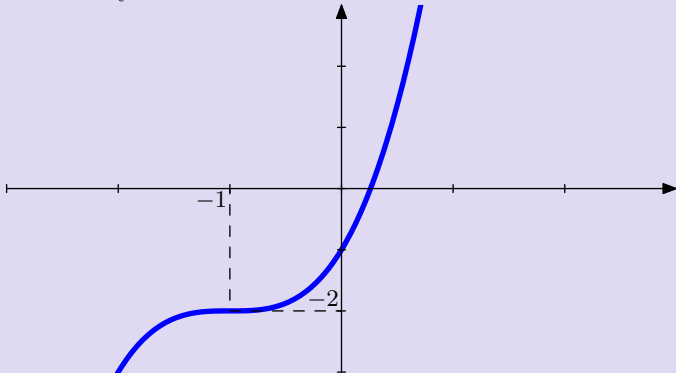
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Question

Graph the function $y = (x - 1)^3$.



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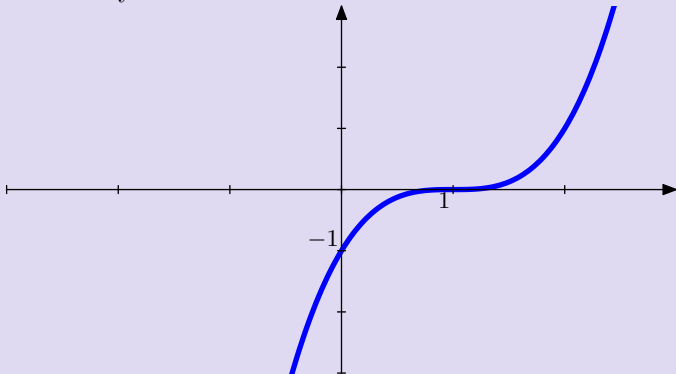
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Question

Find analytical formula for the function.



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Question

Graph the function $y = 1 - (x + 2)^2$.



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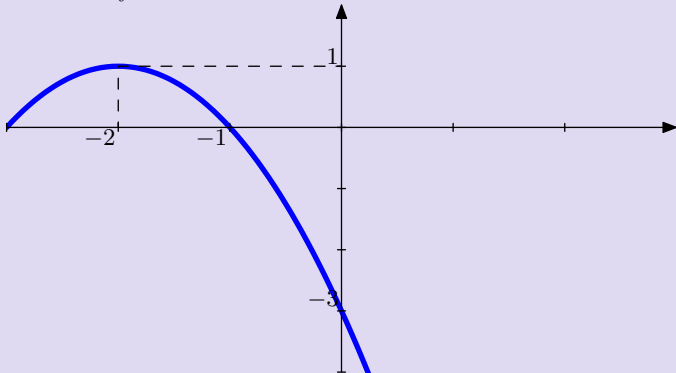
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Question

Find analytical formula for the function.



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Question

Graph the function $y = 1 - \sqrt{x - 3}$.



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Solution

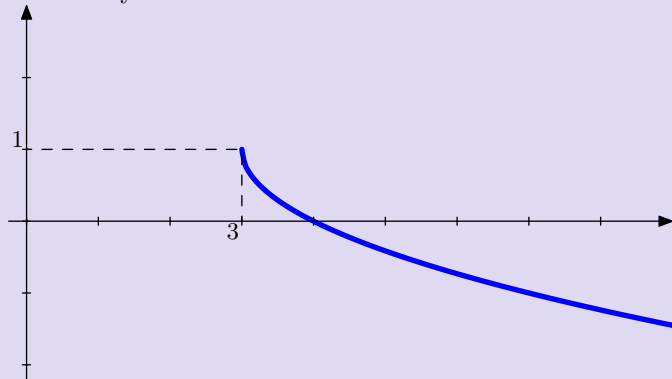
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Question

Find analytical formula for the function.



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Solution

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Question

Graph the function $y = 1 - \frac{1}{2}\sqrt{x+1}$.



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Hint

Solution

Next question

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Question

Graph the function $y = 2 + 3 \sin(x)$.



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Question

Graph the function $y = 2 - \sin(x)$.



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Solution

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Question

Graph the function $y = 1 + \cos(2x)$.



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Solution

Next question

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Question

Graph the function $y = |x^3 - 1|$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - x^2$.

Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up



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Hint

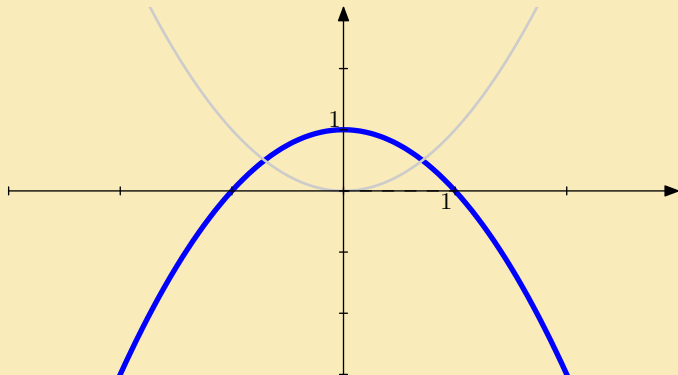
Solution

Next question

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The question is: Graph the function $y = 1 - x^2$.

Answer



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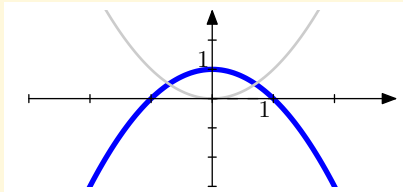
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up

To go back use `Alt+left` arrow



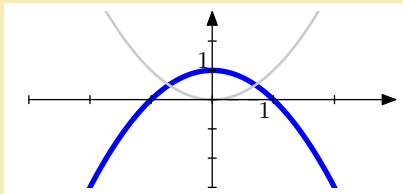
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Hint

Solution

Next question

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Answer

Analytical formula is $y = 1 - x^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = -1 - x^2$.

Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph down.



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Hint

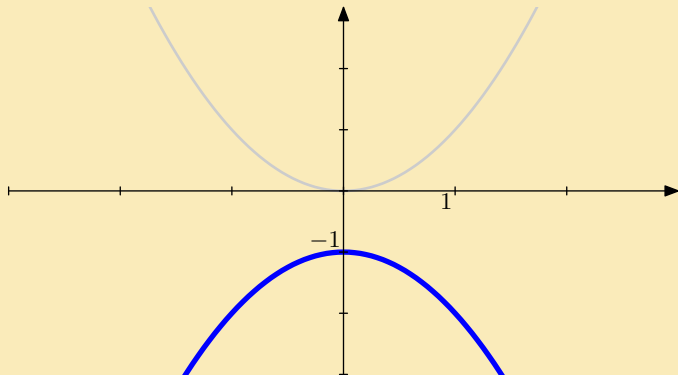
Solution

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The question is: Graph the function $y = -1 - x^2$.

Answer



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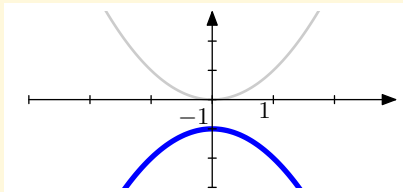
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Hint

Solution

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Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph down.

To go back use **Alt+left** arrow



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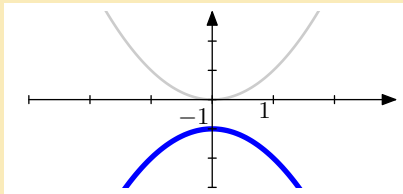
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Hint

Solution

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Answer

Analytical formula is $y = -1 - x^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = x^2 - 1$.

Hint

- Start with $y = x^2$.
- Move the graph down.



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Hint

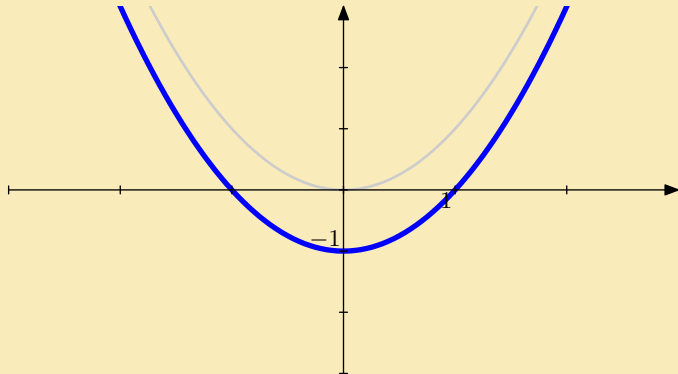
Solution

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Home

The question is: Graph the function $y = x^2 - 1$.

Answer



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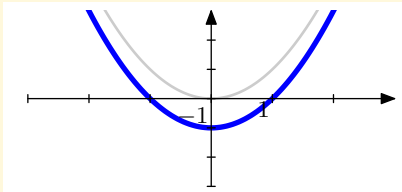
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Hint

Solution

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Hint

- Start with $y = x^2$.
- Move the graph down.

To go back use `Alt+left` arrow



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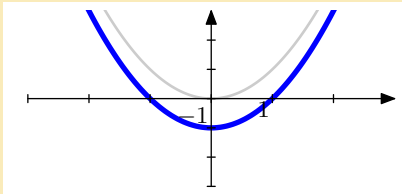
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Solution

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Answer

Analytical formula is $y = x^2 - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^2$.

Hint

- Start with $y = x^2$.
- Move the graph to the right.



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Hint

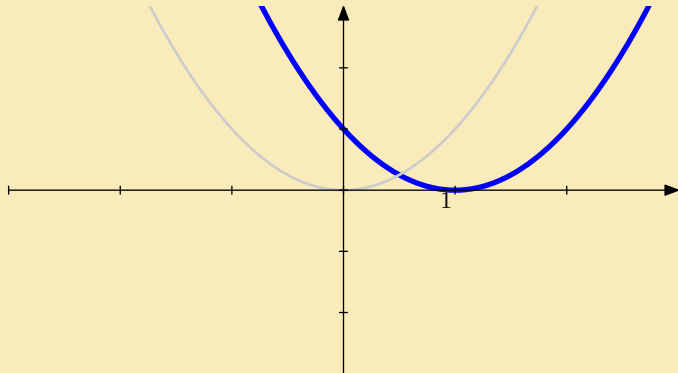
Solution

Next question

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The question is: Graph the function $y = (x - 1)^2$.

Answer



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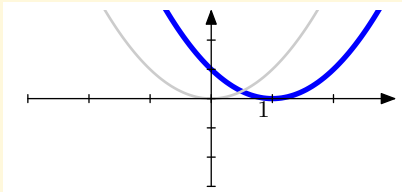
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Hint

Solution

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Hint

- Start with $y = x^2$.
- Move the graph to the right.

To go back use `Alt+left` arrow



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Robert Mařík

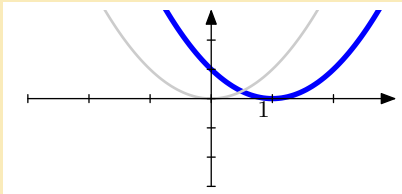
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x - 1)^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = x^3 + 2$.

Hint

- Start with $y = x^3$.
- Move the graph up



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Hint

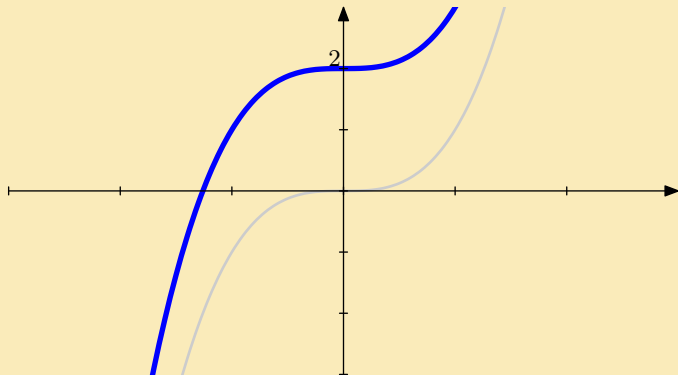
Solution

Next question

Home

The question is: Graph the function $y = x^3 + 2$.

Answer



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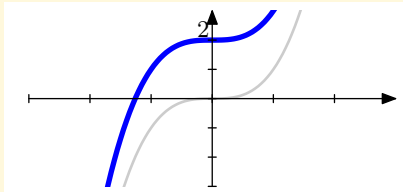
created using *AcroTeX*

Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph up

To go back use `Alt+left` arrow



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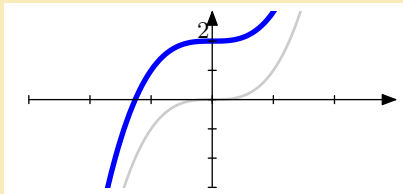
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = x^3 + 2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x + 1)^3 + 2$.

Hint

- Start with $y = x^3$.
- Move the graph up
- Move the graph to the left.



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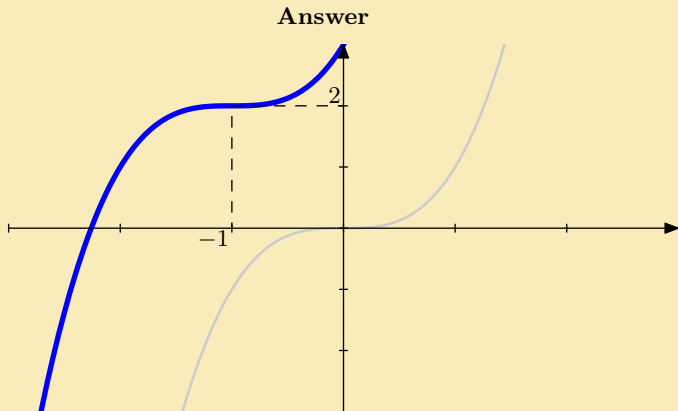
Hint

Solution

Next question

Home

The question is: Graph the function $y = (x + 1)^3 + 2$.



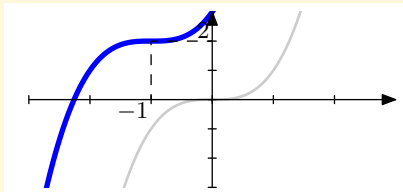
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph up
- Move the graph to the left.

To go back use **Alt+left** arrow



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Robert Mařík

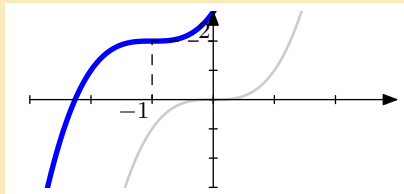
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x + 1)^3 + 2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x + 2)^3$.

Hint

- Start with $y = x^3$.
- Move the graph to the left.



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Hint

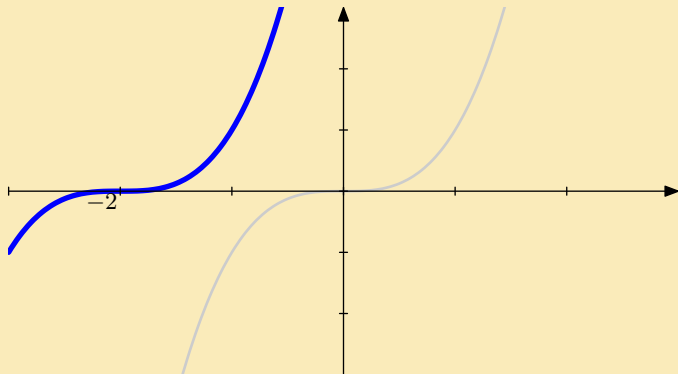
Solution

Next question

Home

The question is: Graph the function $y = (x + 2)^3$.

Answer



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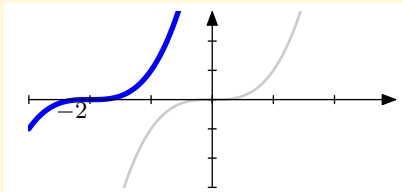
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph to the left.

To go back use `Alt+left` arrow



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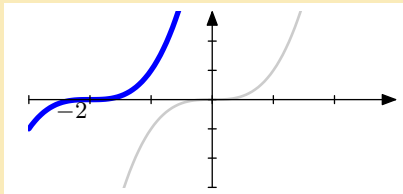
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x + 2)^3$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 2)^3$.

Hint

- Start with $y = x^3$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.



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Hint

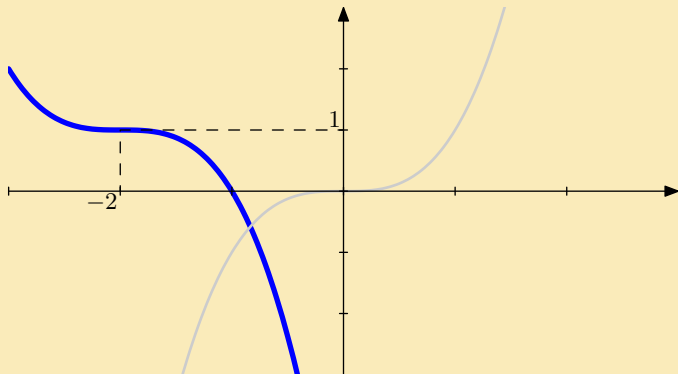
Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 2)^3$.

Answer



Graphs of functions
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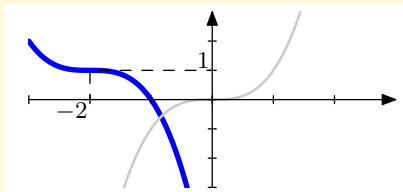
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.

To go back use `Alt+left` arrow



Graphs of functions
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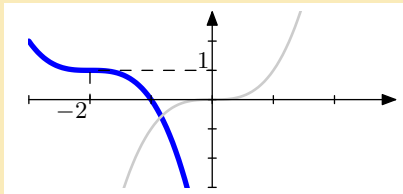
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - (x + 2)^3$.



Graphs of functions
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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - e^x$.

Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph up



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Hint

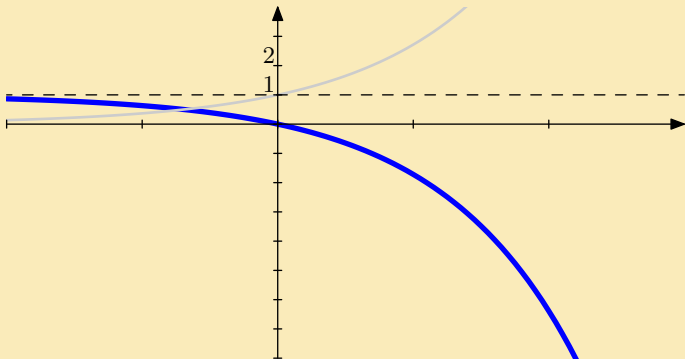
Solution

Next question

Home

The question is: Graph the function $y = 1 - e^x$.

Answer



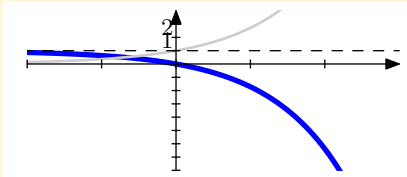
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph up

To go back use `Alt+left` arrow



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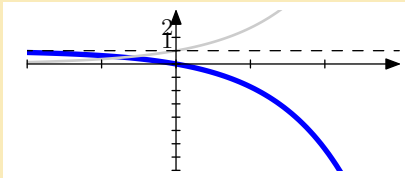
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - e^x$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 3 - e^{-x}$.

Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Reflect about x -axis.
- Move the graph up



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Hint

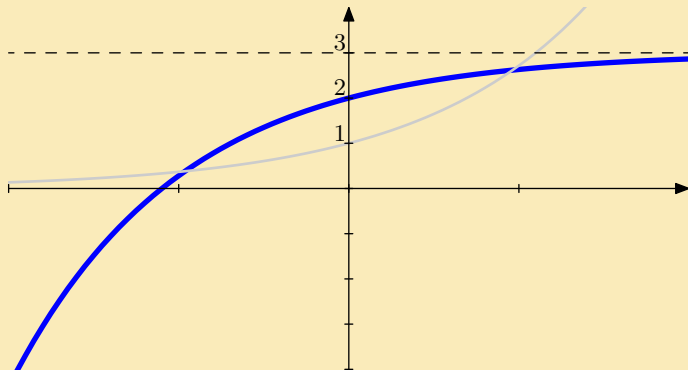
Solution

Next question

Home

The question is: Graph the function $y = 3 - e^{-x}$.

Answer



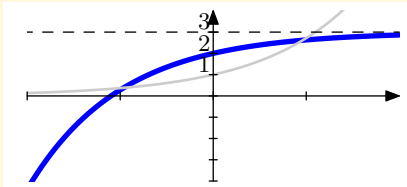
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Reflect about x -axis.
- Move the graph up

To go back use `Alt+left` arrow



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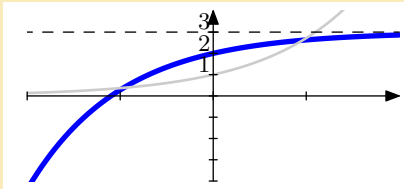
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = 3 - e^{-x}$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 + e^{-x}$.

Hint

- Start with $y = e^x$.
- Reflect about x -axis.
- Move the graph up



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Hint

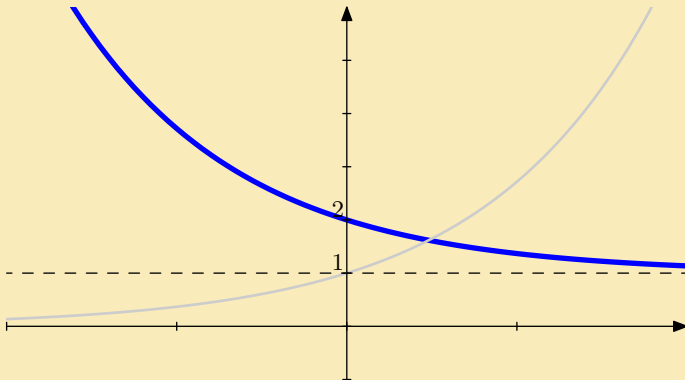
Solution

Next question

Home

The question is: Graph the function $y = 1 + e^{-x}$.

Answer



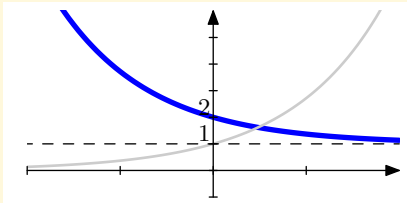
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about x -axis.
- Move the graph up

To go back use `Alt+left` arrow



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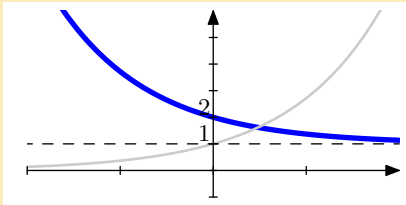
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 + e^{-x}$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = e^x - 1$.

Hint

- Start with $y = e^x$.
- Move the graph up



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Hint

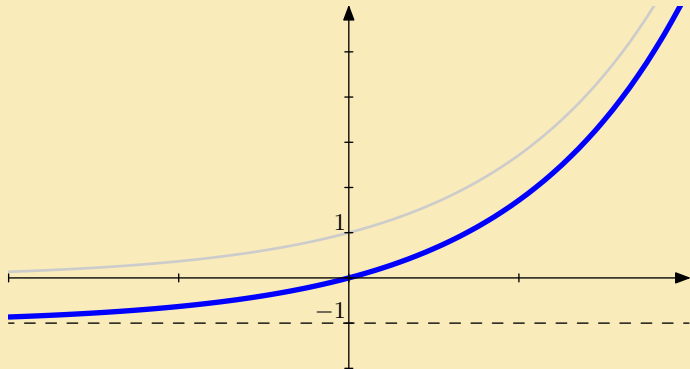
Solution

Next question

Home

The question is: Graph the function $y = e^x - 1$.

Answer



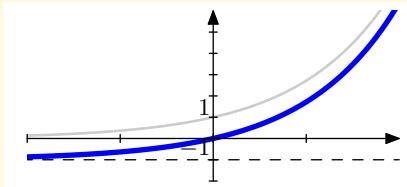
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Move the graph up

To go back use `Alt+left` arrow



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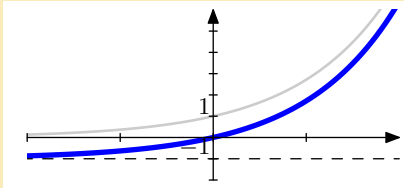
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = e^x - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = e^{-x} - 1$.

Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph down.



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Hint

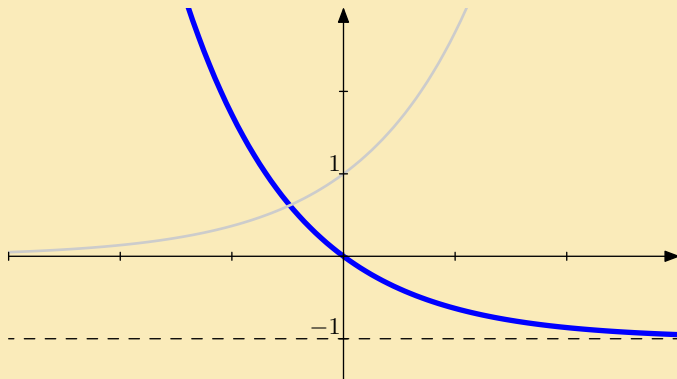
Solution

Next question

Home

The question is: Graph the function $y = e^{-x} - 1$.

Answer



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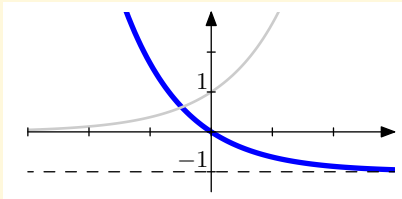
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph down.

To go back use **Alt+left** arrow



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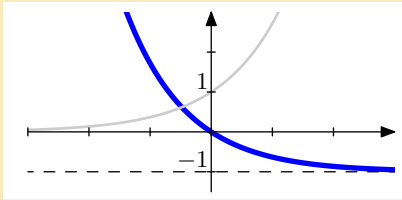
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = e^{-x} - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = e^{-x} + 1$.

Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph up



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Hint

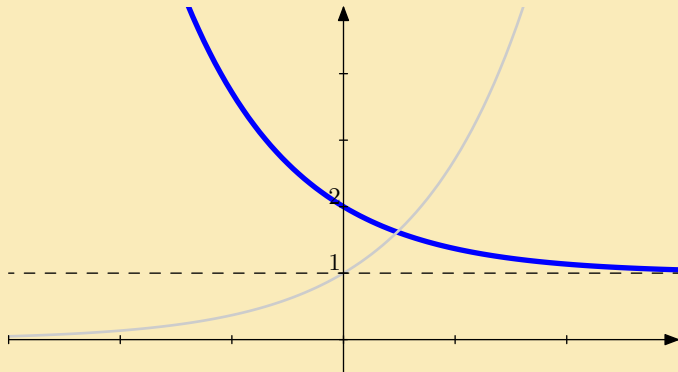
Solution

Next question

Home

The question is: Graph the function $y = e^{-x} + 1$.

Answer



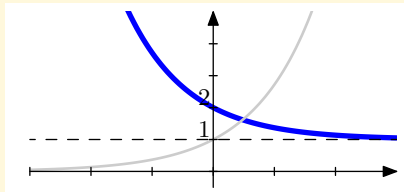
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about y -axis.
- Move the graph up

To go back use **Alt+left** arrow



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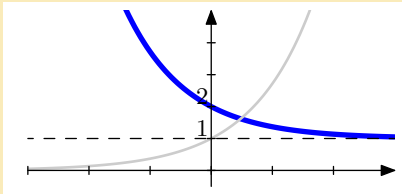
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = e^{-x} + 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 2 - e^x$.

Hint

- Start with $y = e^x$.
- Reflect about x -axis.
- Move the graph up



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Hint

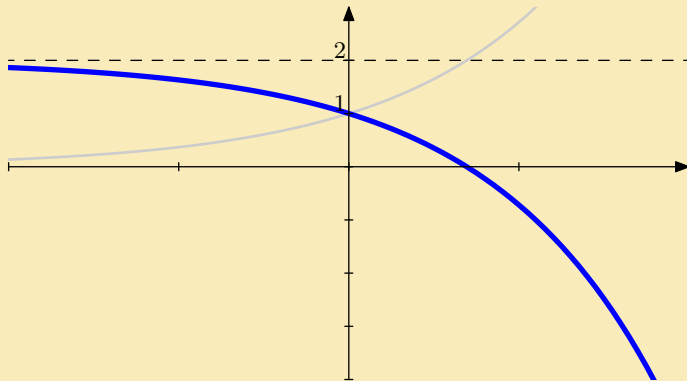
Solution

Next question

Home

The question is: Graph the function $y = 2 - e^x$.

Answer



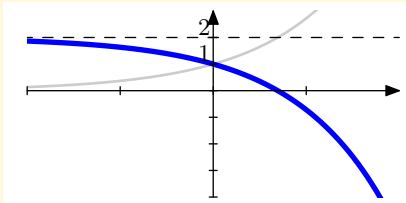
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Hint

Solution

Next question

Home



Hint

- Start with $y = e^x$.
- Reflect about x -axis.
- Move the graph up

To go back use `Alt+left` arrow



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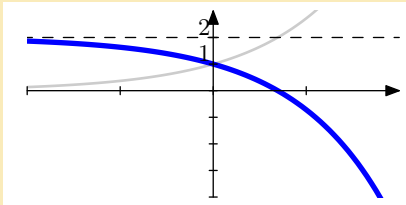
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 2 - e^x$.



Graphs of functions
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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 + \sqrt{x - 3}$.

Hint

- Start with $y = \sqrt{x}$.
- Move the graph to the right.
- Move the graph up



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Hint

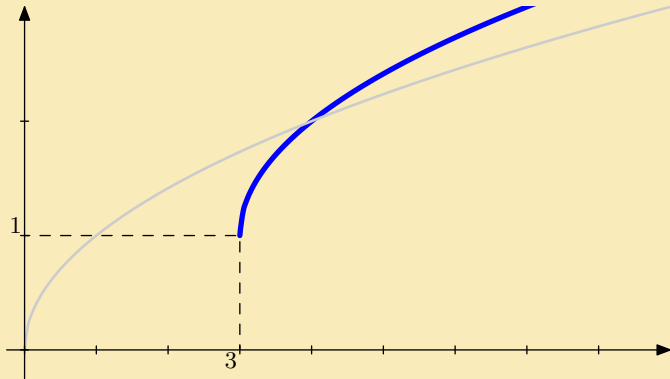
Solution

Next question

Home

The question is: Graph the function $y = 1 + \sqrt{x - 3}$.

Answer



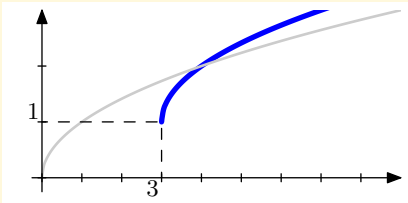
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Hint

Solution

Next question

Home



Hint

- Start with $y = \sqrt{x}$.
- Move the graph to the right.
- Move the graph up

To go back use `Alt+left` arrow



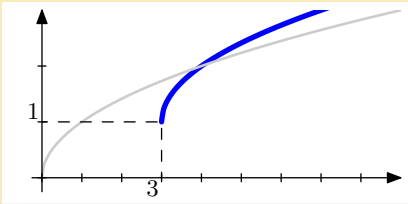
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = 1 + \sqrt{x - 3}$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 2 - \sqrt{x - 3}$.

Hint

- Start with $y = \sqrt{x}$.
- Reflect about x -axis.
- Move the graph to the right.
- Move the graph up



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Hint

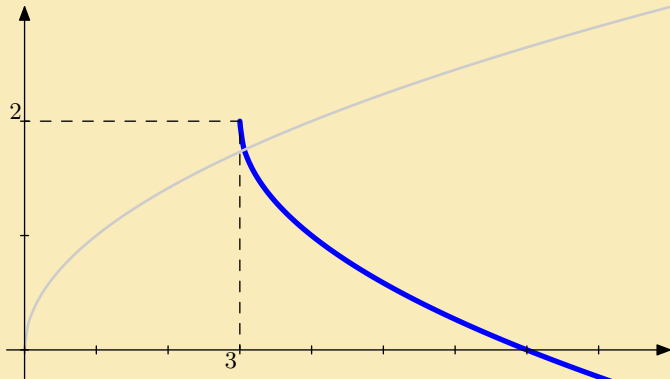
Solution

Next question

Home

The question is: Graph the function $y = 2 - \sqrt{x - 3}$.

Answer



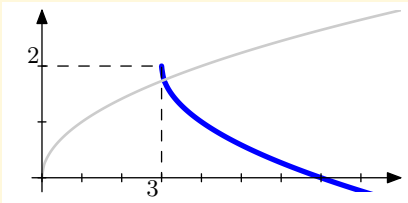
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Hint

Solution

Next question

Home



Hint

- Start with $y = \sqrt{x}$.
- Reflect about x -axis.
- Move the graph to the right.
- Move the graph up

To go back use `Alt+left` arrow



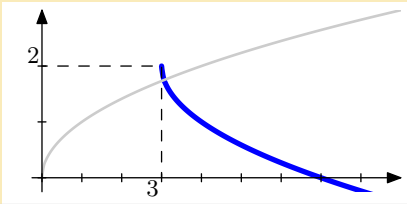
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 2 - \sqrt{x - 3}$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = \frac{1}{x+2} + 1$.

Hint

- Start with $y = \frac{1}{x}$.
- Move the graph to the left.
- Move the graph up



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Hint

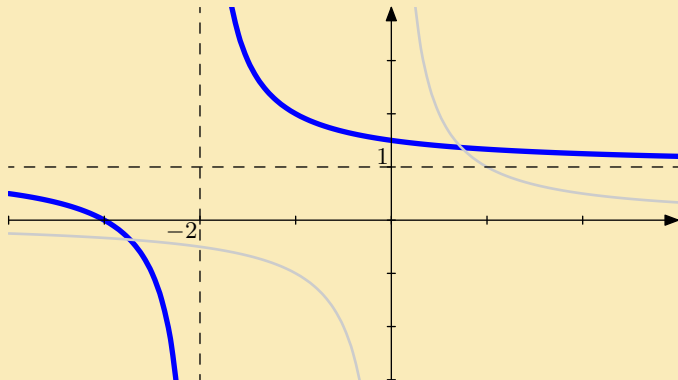
Solution

Next question

Home

The question is: Graph the function $y = \frac{1}{x+2} + 1$.

Answer



Graphs of functions
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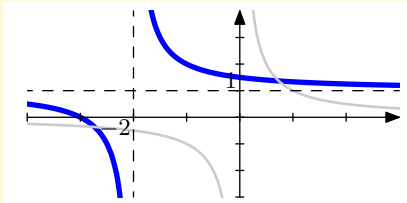
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Hint

Solution

Next question

Home



Hint

- Start with $y = \frac{1}{x}$.
- Move the graph to the left.
- Move the graph up

To go back use `Alt+left` arrow



Graphs of functions
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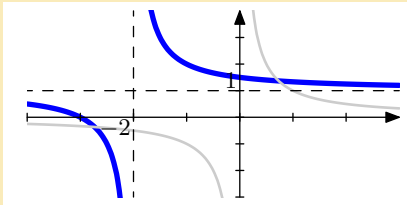
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = \frac{1}{x+2} + 1$.



Graphs of functions
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Hint

Solution

Next question

Home

The question is: Graph the function $y = \ln(x + 2)$.

Hint

- Start with $y = \ln x$.
- Move the graph to the left.



Graphs of functions

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Hint

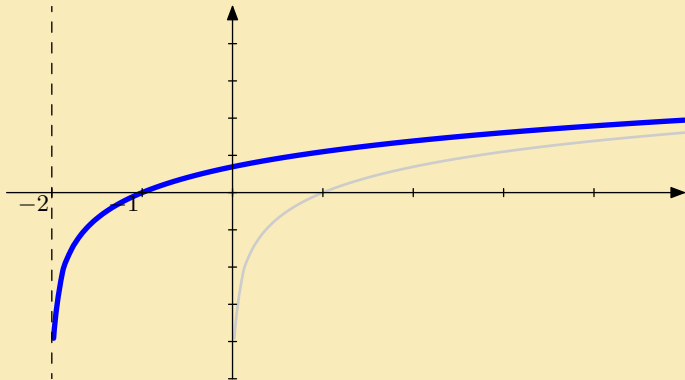
Solution

Next question

Home

The question is: Graph the function $y = \ln(x + 2)$.

Answer



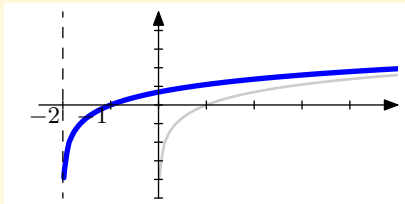
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Hint

Solution

Next question

Home



Hint

- Start with $y = \ln x$.
- Move the graph to the left.

To go back use `Alt+left` arrow



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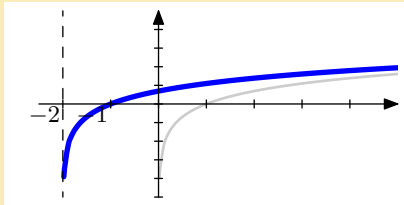
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = \ln(x + 2)$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - \ln(x + 2)$.

Hint

- Start with $y = \ln x$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.



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Hint

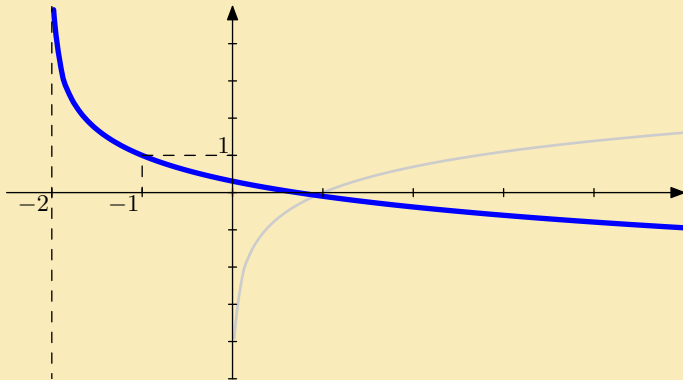
Solution

Next question

Home

The question is: Graph the function $y = 1 - \ln(x + 2)$.

Answer



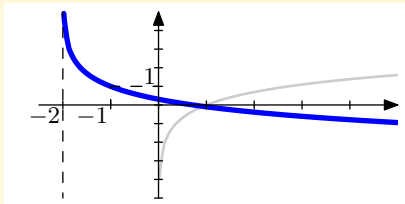
Graphs of functions
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Hint

Solution

Next question

Home



Hint

- Start with $y = \ln x$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.

To go back use `Alt+left arrow`



Graphs of functions
Robert Mařík

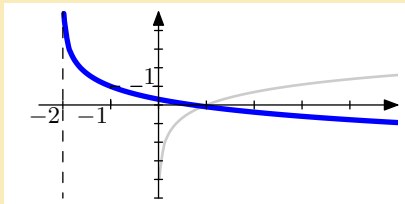
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = 1 - \ln(x + 2)$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - \frac{2}{x}$.

Hint

- Start with $y = \frac{1}{x}$.
- Reflect about x -axis.
- Stretch or restrict the graph vertically.
- Move the graph up



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Hint

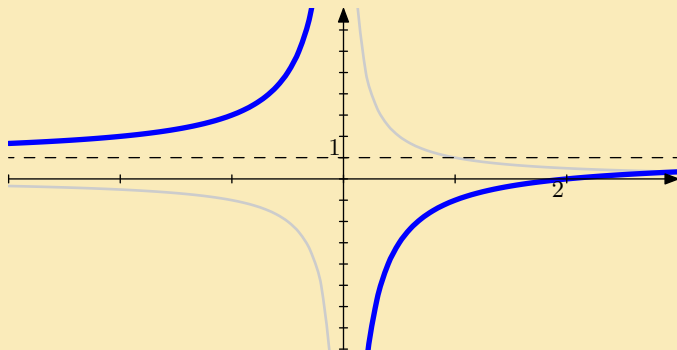
Solution

Next question

Home

The question is: Graph the function $y = 1 - \frac{2}{x}$.

Answer



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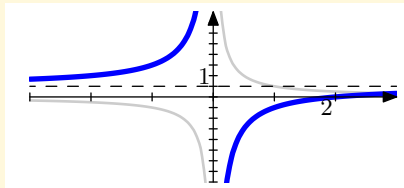
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Hint

Solution

Next question

Home



Hint

- Start with $y = \frac{1}{x}$.
- Reflect about x -axis.
- Stretch or restrict the graph vertically.
- Move the graph up

To go back use `Alt+left` arrow



Graphs of functions
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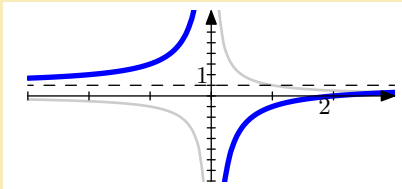
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = 1 - \frac{2}{x}$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 1)^2$.

Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.



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Hint

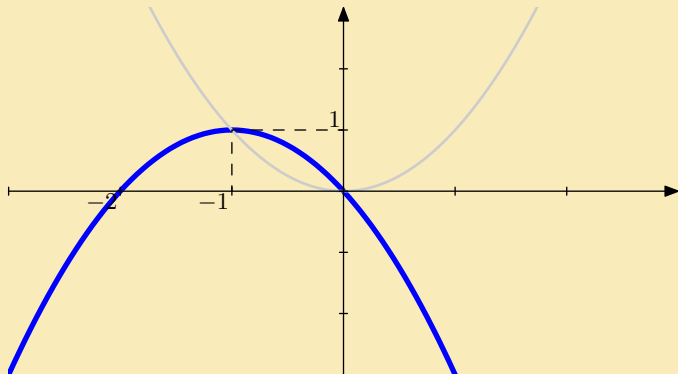
Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 1)^2$.

Answer



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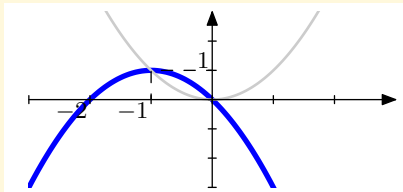
created using *AcroTeX*

Hint

Solution

Next question

Home



Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.

To go back use `Alt+left` arrow



Graphs of functions
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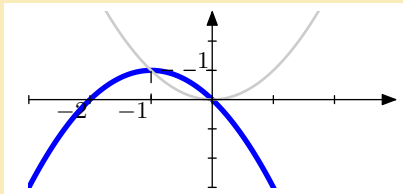
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - (x + 1)^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^2 - 1$.

Hint

- Start with $y = x^2$.
- Move the graph down.
- Move the graph to the right.



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Hint

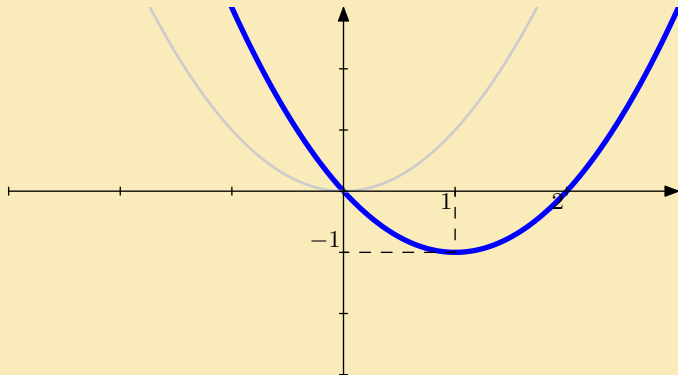
Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^2 - 1$.

Answer



Graphs of functions
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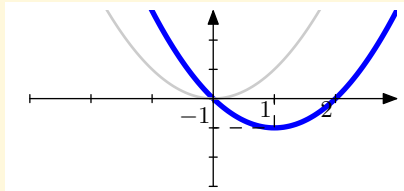
created using *AcroTeX*

Hint

Solution

Next question

Home



Hint

- Start with $y = x^2$.
- Move the graph down.
- Move the graph to the right.

To go back use `Alt+left arrow`



Graphs of functions
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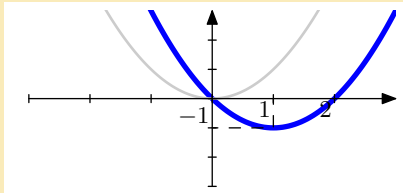
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x - 1)^2 - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 1)^3$.

Hint

- Start with $y = x^3$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.



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Hint

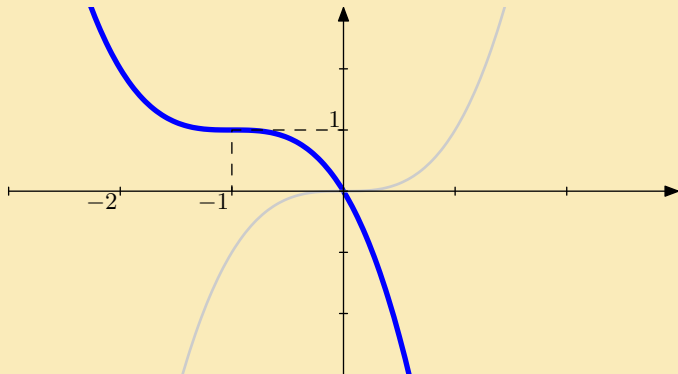
Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 1)^3$.

Answer



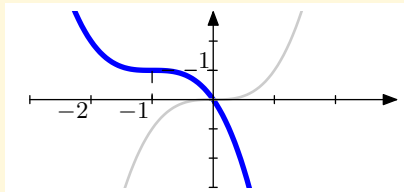
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.

To go back use `Alt+left` arrow



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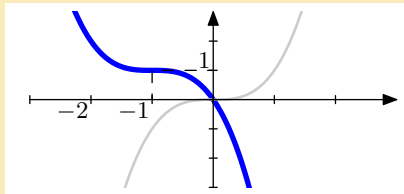
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - (x + 1)^3$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^3 - 1$.

Hint

- Start with $y = x^3$.
- Move the graph down.
- Move the graph to the right.



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Hint

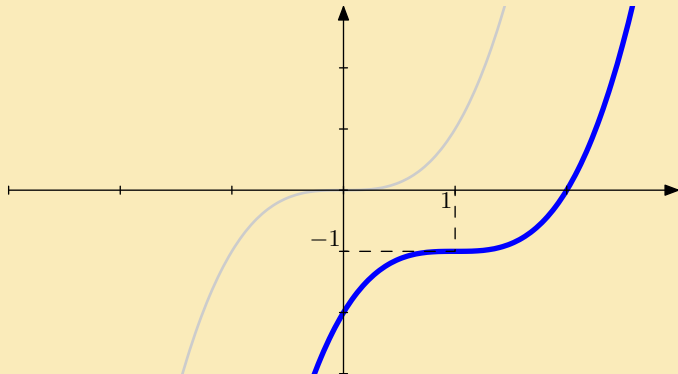
Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^3 - 1$.

Answer



Graphs of functions
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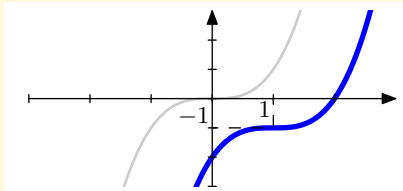
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph down.
- Move the graph to the right.

To go back use `Alt+left arrow`



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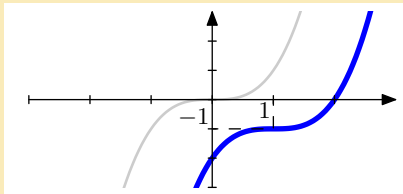
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x - 1)^3 - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = x^3 - 1$.

Hint

- Start with $y = x^3$.
- Move the graph down.



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Hint

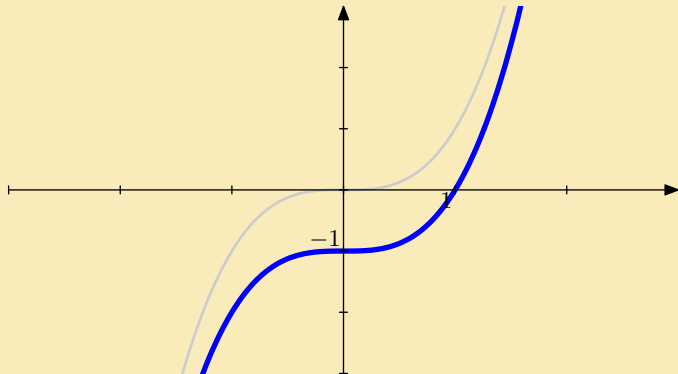
Solution

Next question

Home

The question is: Graph the function $y = x^3 - 1$.

Answer



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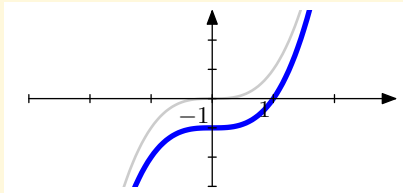
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph down.

To go back use `Alt+left arrow`



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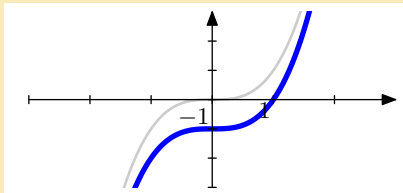
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = x^3 - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^2$.

Hint

- Start with $y = x^2$.
- Move the graph to the right.



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Hint

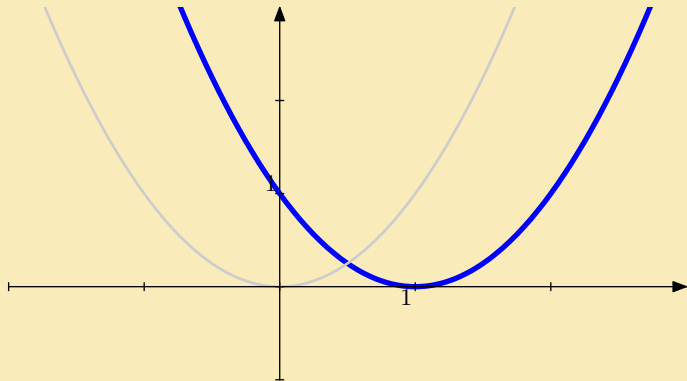
Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^2$.

Answer



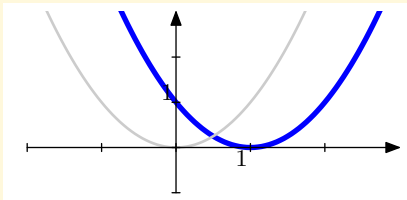
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^2$.
- Move the graph to the right.

To go back use `Alt+left` arrow



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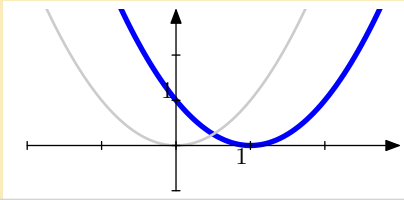
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x - 1)^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = x^3 - 1$.

Hint

- Start with $y = x^3$.
- Move the graph down.



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Hint

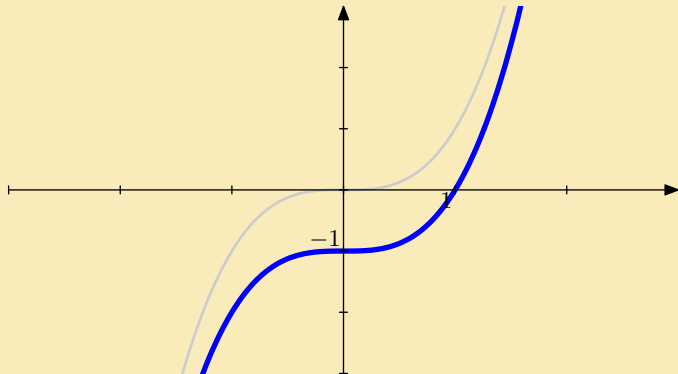
Solution

Next question

Home

The question is: Graph the function $y = x^3 - 1$.

Answer



Graphs of functions
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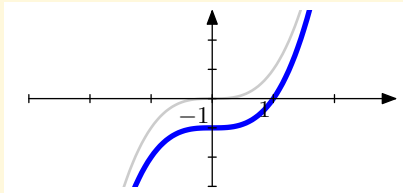
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph down.

To go back use `Alt+left` arrow



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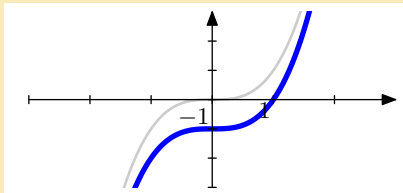
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = x^3 - 1$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x + 1)^3 - 2$.

Hint

- Start with $y = x^3$.
- Move the graph down.
- Move the graph to the left.



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Hint

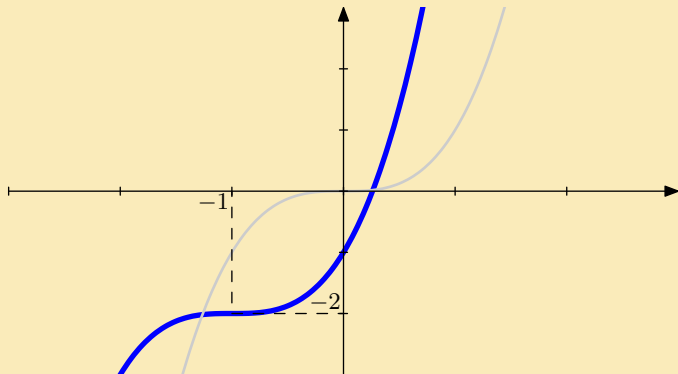
Solution

Next question

Home

The question is: Graph the function $y = (x + 1)^3 - 2$.

Answer



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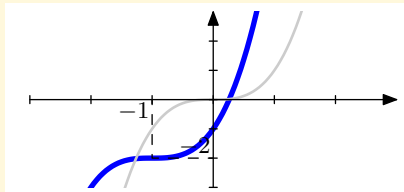
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph down.
- Move the graph to the left.

To go back use `Alt+left arrow`



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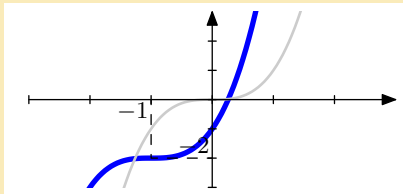
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Hint

Solution

Next question

Home



Answer

Anlytical formula is $y = (x + 1)^3 - 2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^3$.

Hint

- Start with $y = x^3$.
- Move the graph to the right.



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Hint

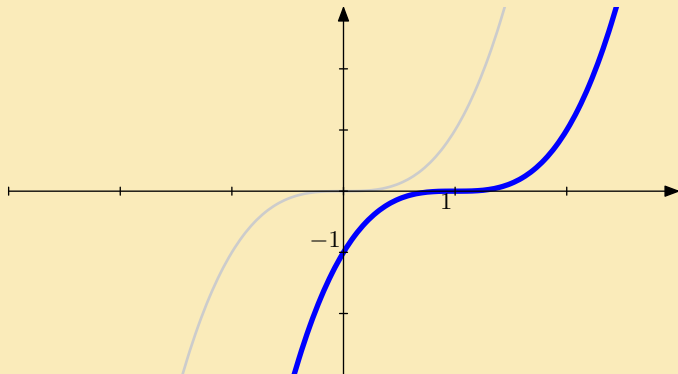
Solution

Next question

Home

The question is: Graph the function $y = (x - 1)^3$.

Answer



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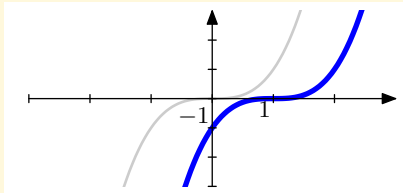
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^3$.
- Move the graph to the right.

To go back use `Alt+left arrow`



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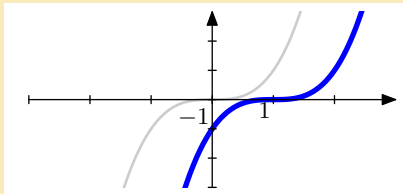
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = (x - 1)^3$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 2)^2$.

Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.



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Hint

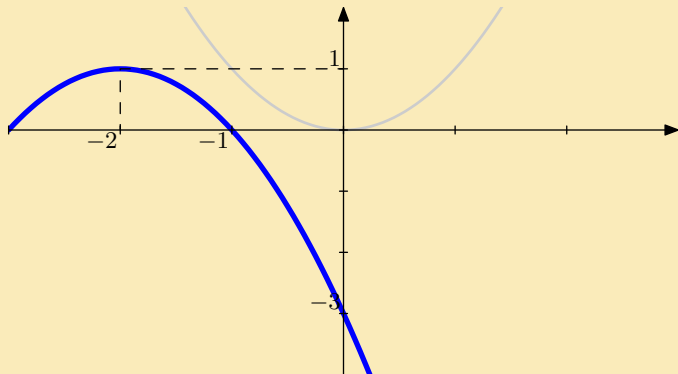
Solution

Next question

Home

The question is: Graph the function $y = 1 - (x + 2)^2$.

Answer



Graphs of functions
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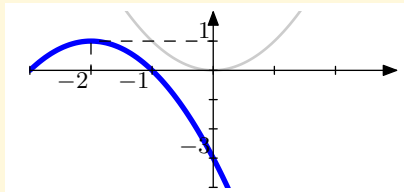
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Hint

Solution

Next question

Home



Hint

- Start with $y = x^2$.
- Reflect about x -axis.
- Move the graph up
- Move the graph to the left.

To go back use `Alt+left` arrow



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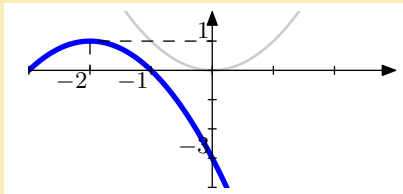
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - (x + 2)^2$.



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - \sqrt{x - 3}$.

Hint

- Start with $y = \sqrt{x}$.
- Reflect about x -axis.
- Move the graph to the right.
- Move the graph up



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Hint

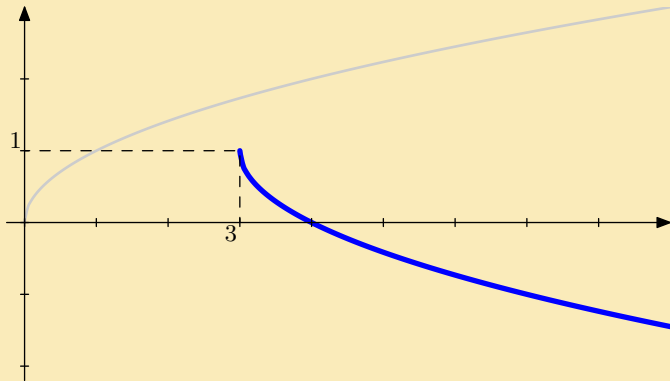
Solution

Next question

Home

The question is: Graph the function $y = 1 - \sqrt{x - 3}$.

Answer



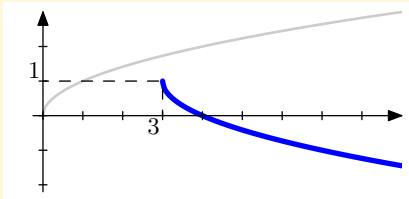
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Hint

Solution

Next question

Home



Hint

- Start with $y = \sqrt{x}$.
- Reflect about x -axis.
- Move the graph to the right.
- Move the graph up

To go back use `Alt+left arrow`



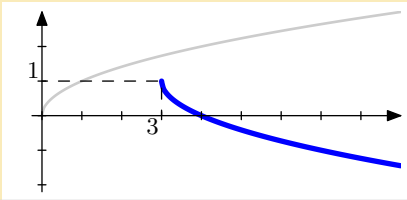
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Hint

Solution

Next question

Home



Answer

Analytical formula is $y = 1 - \sqrt{x - 3}$.



Graphs of functions
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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 - \frac{1}{2}\sqrt{x+1}$.

Hint

- Start with $y = \sqrt{x}$.
- Stretch or restrict the graph vertically.
- Reflect about x -axis.
- Move the graph to the left.
- Move the graph up



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Hint

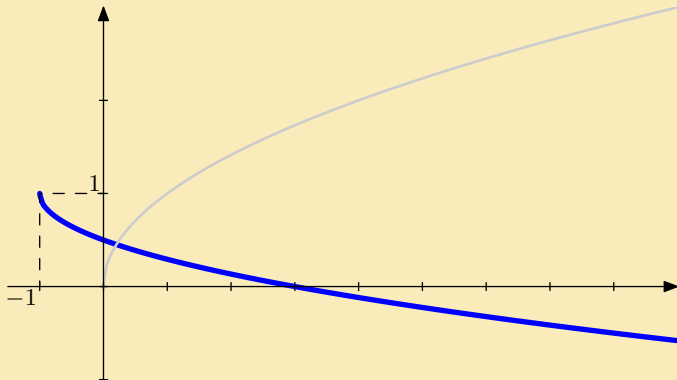
Solution

Next question

Home

The question is: Graph the function $y = 1 - \frac{1}{2}\sqrt{x+1}$.

Answer



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 2 + 3 \sin(x)$.

Hint

- Start with $y = \sin(x)$.
- Stretch or restrict the graph vertically.
- Move the graph up



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Hint

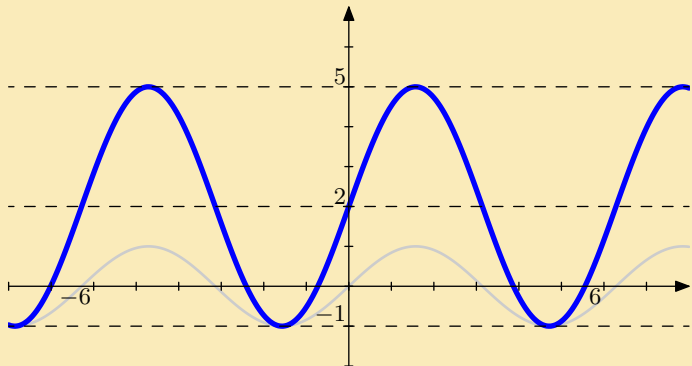
Solution

Next question

Home

The question is: Graph the function $y = 2 + 3 \sin(x)$.

Answer



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 2 - \sin(x)$.

Hint

- Start with $y = \sin(x)$.
- Reflect about x -axis.
- Move the graph up



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Hint

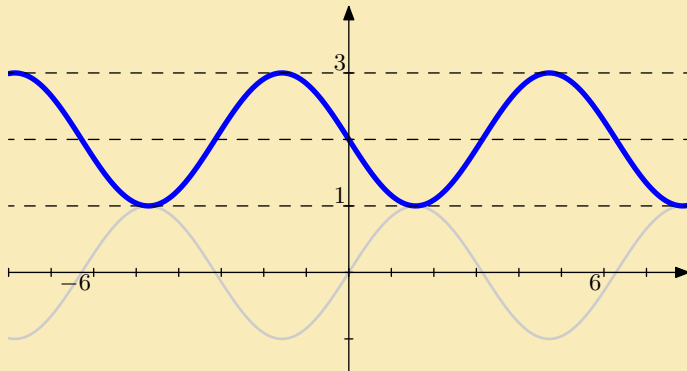
Solution

Next question

Home

The question is: Graph the function $y = 2 - \sin(x)$.

Answer



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Hint

Solution

Next question

Home

The question is: Graph the function $y = 1 + \cos(2x)$.

Hint

- Start with $y = \cos(x)$.
- Stretch or restrict the graph horizontally.
- Move the graph up



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Hint

Solution

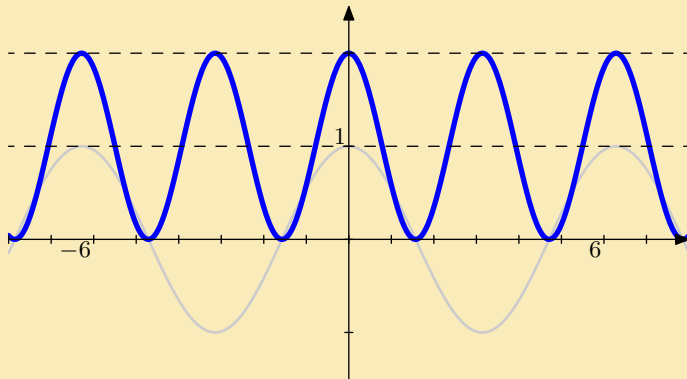
Next question

Home

The question is: Graph the function $y = 1 + \cos(2x)$.

Answer

3



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Hint

Solution

Next question

Home

The question is: Graph the function $y = |x^3 - 1|$.

Hint

- Start with $y = x^3$.
- Move the graph down.
- Reflect the part of the graph which is below the x -axis about the x -axis.



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Hint

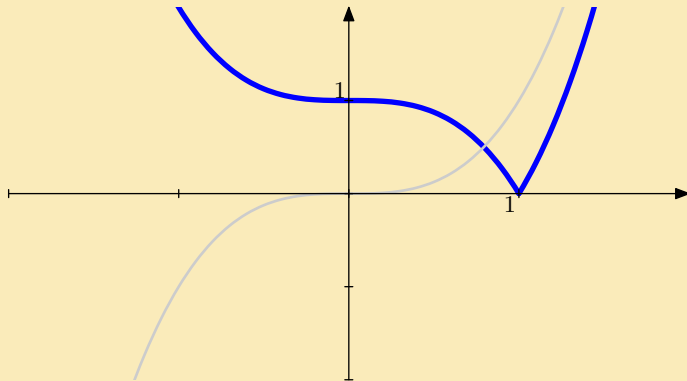
Solution

Next question

Home

The question is: Graph the function $y = |x^3 - 1|$.

Answer



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Hint

Solution

Next question

Home