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14. Scaffolded example

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Recitation due Aug 4, 2021 20:30 IST Completed

Practice

In the following problems, we will identify the domain of the function $\ln(1-x^2-y)$ and sketch some level curves.

Find the domain

2/2 points (graded)
Recall that the domain of a function is defined by the set of points such that the function is well defined.

Give a relationship for y in terms of x that describes the region where the function $\ln(1-x^2-y)$ is well defined.

y ○ $>$ ○ $\geq$ ○ $=$ ◉ $<$ ○ $\leq$ ✔

1-x^2 ✔ **Answer:** 1-x^2

? INPUT HELP

Submit You have used 1 of 5 attempts

Answers are displayed within the problem

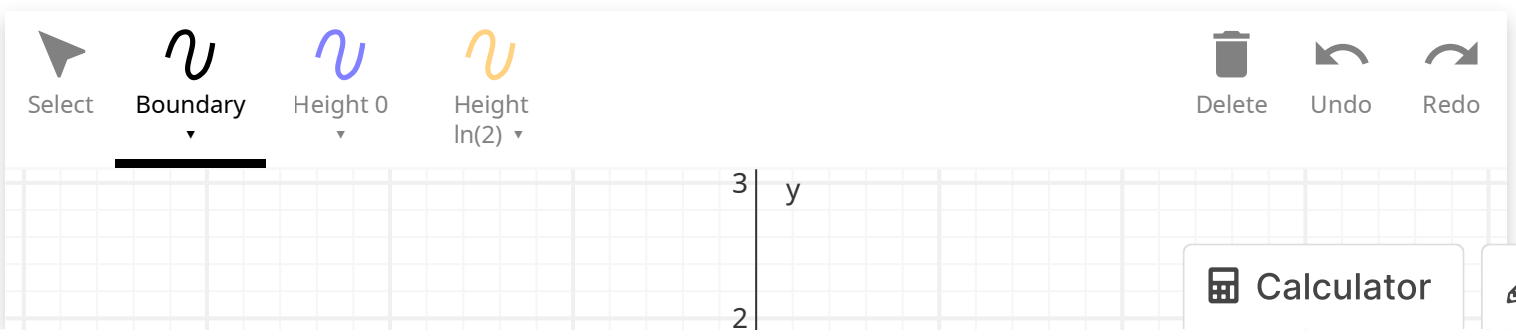
Sketch level curves

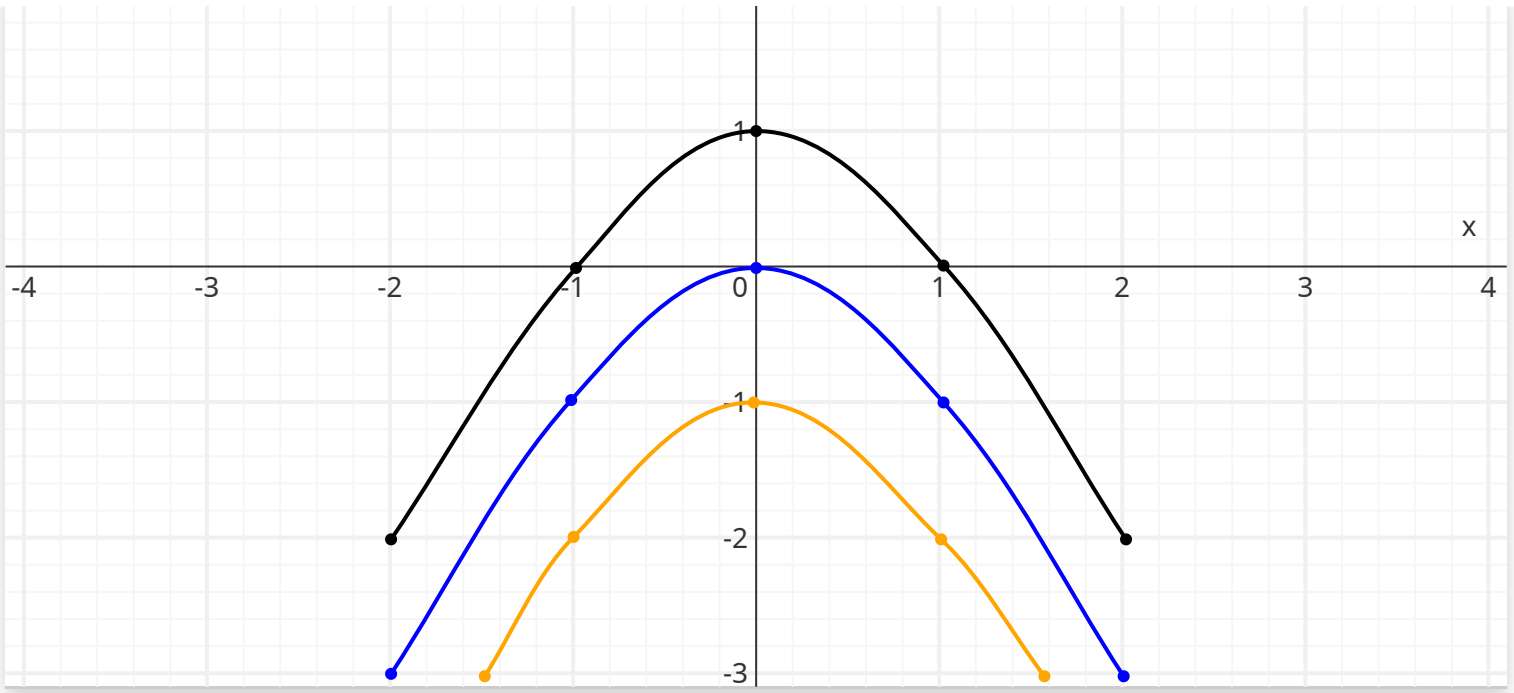
1.0/1 point (graded)
Sketch some select level curves of the function $\ln(1-x^2-y)$.

Sketch the boundary of the domain using the boundary tool. Then sketch the level curve of height 0 with the height 0 tool, and sketch the level curve of height $\ln(2)$ with the height ln(2) tool.

Select the tool you wish to draw with. Select freeform or spline for drawing curves using the tool dropdown. Freeform allows you to draw freehand (with some smoothing). Spline draws by allowing you to select discrete points by clicking on the canvas, and will automatically connect your selected points.

You can select a drag a curve that has been drawn using the select tool. If you use the spline tool to draw the curve rather than the freeform tool, you can select and edit points.





Answer: See solution.

✔

Good Job

Submit You have used 1 of 25 attempts

Answers are displayed within the problem

Sketch the yz-slice

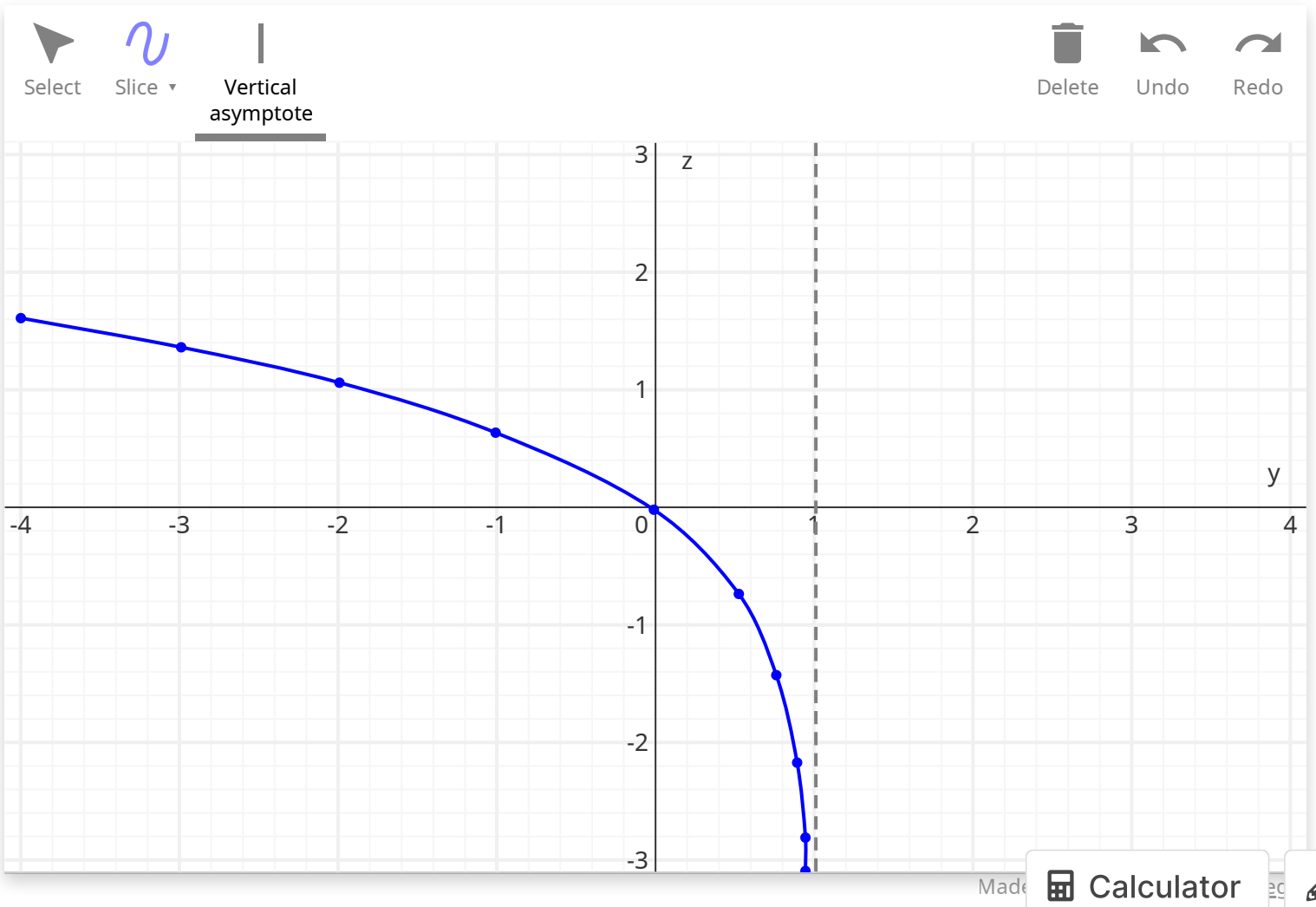
1.0/1 point (graded)

Sketch the intersection of the function $\ln(1 - x^2 - y)$ with the yz-plane.

Select the tool you wish to draw with. Select freeform or spline for drawing curves using the tool dropdown. Freeform allows you to draw freehand (with some smoothing). Spline draws by allowing you to select discrete points by clicking on the canvas, and will automatically connect your selected points.

You can select a drag a curve that has been drawn using the select tool. If you use the spline tool to draw the curve rather than the freeform tool, you can select and edit points.

Use the vertical asymptote tools to sketch places where the function becomes unbounded towards positive or negative infinity.



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Answer: See solution.

✔

Good Job

Submit You have used 1 of 20 attempts

Answers are displayed within the problem

Sketch the xz-slice

1.0/1 point (graded)

Sketch the intersection of the function $\ln\left(1-x^2-y\right)$ with the xz-plane.

Select the tool you wish to draw with. Select freeform or spline for drawing curves using the tool dropdown. Freeform allows you to draw freehand (with some smoothing). Spline draws by allowing you to select discrete points by clicking on the canvas, and will automatically connect your selected points.

You can select a drag a curve that has been drawn using the select tool. If you use the spline tool to draw the curve rather than the freeform tool, you can select and edit points.

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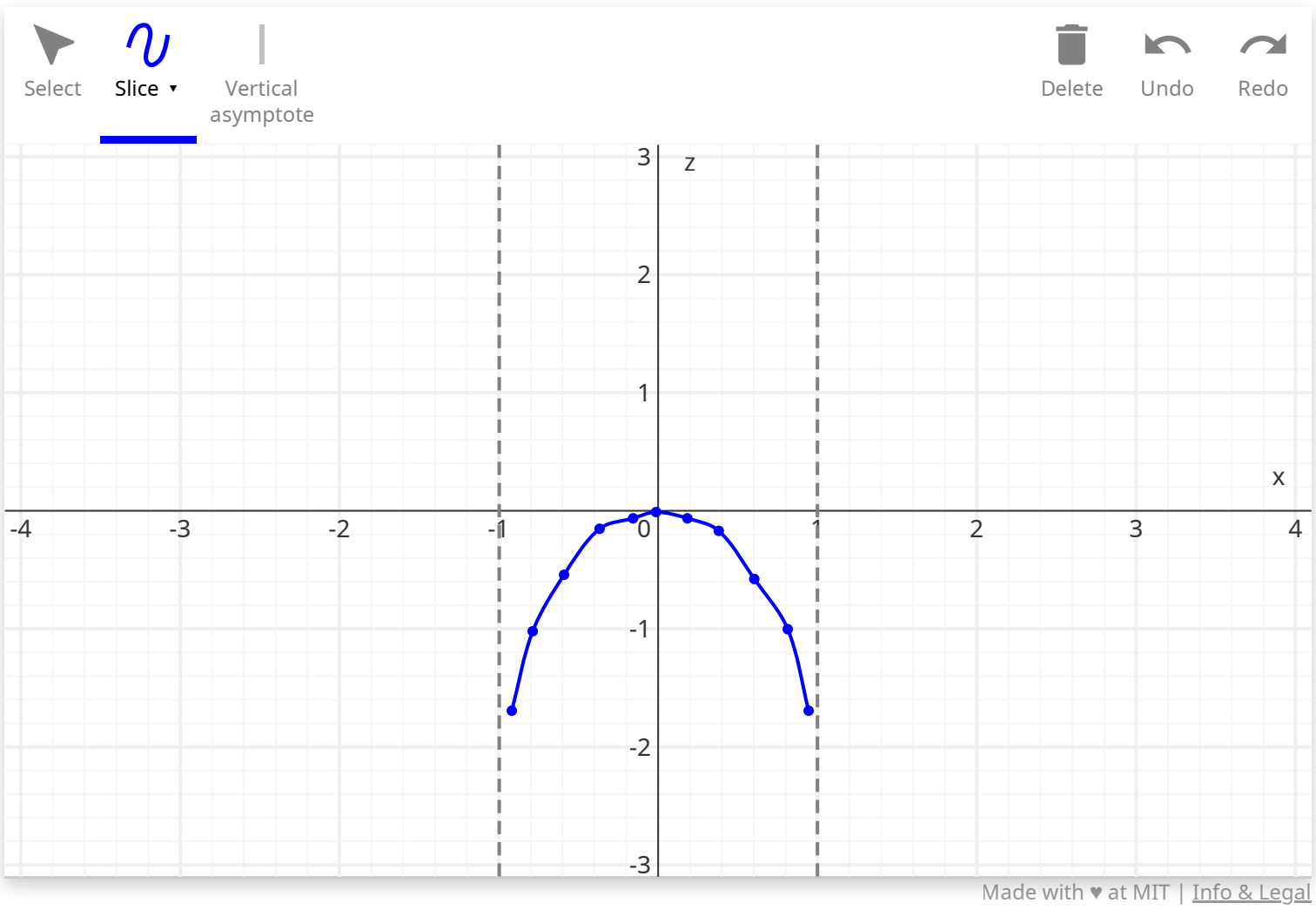

Answer: See solution.

✔

Good Job

Submit You have used 1 of 20 attempts

Answers are displayed within the problem

Identify the surface

1/1 point (graded)

Choose the 3D rendering that best shows the surface $\ln\left(1-x^2-y\right)$ based on you

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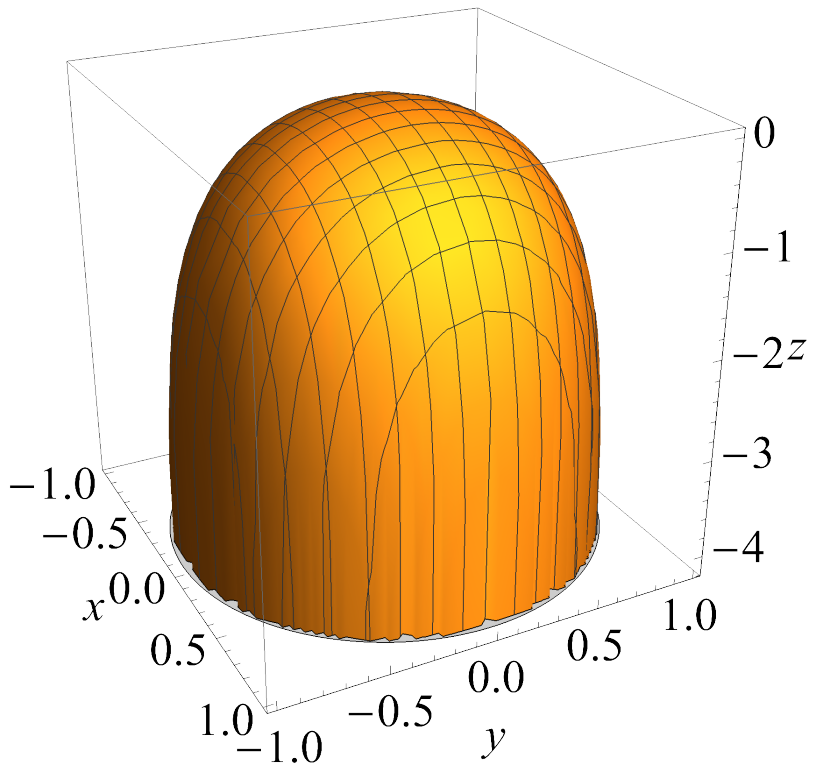

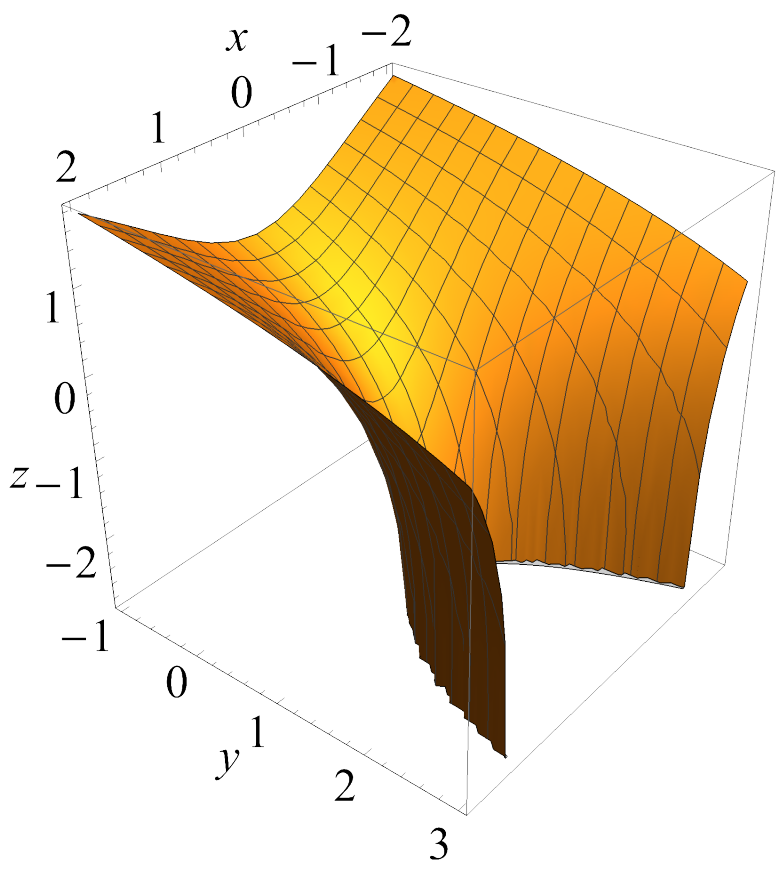

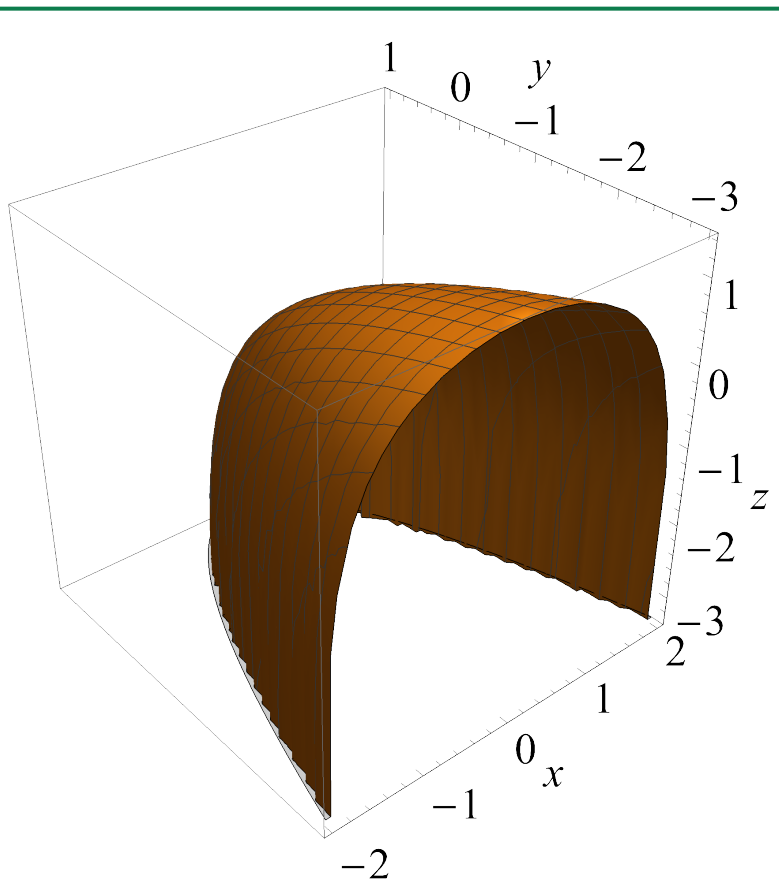

None of the above.

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Submit You have used 2 of 3 attempts

Answers are displayed within the problem

14. Scaffolded example

Topic: Unit 1: Functions of two variables / 14. Scaffolded example

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Vertical asymptode How can I find vertical asymtode?	2
Vertical asymptode I have set ln(1-y) where y=1 to zero. I am getting horizontal asymptode. How can I figure out vertical asymptode? Natural log domain...	2
domain Don't understand the grading, only one answer possible, think mine is correct as ln(0) is not defined.	11
Where is the solution? Hi I couldn't figure out what the grader was asking for "Sketch level curves" and burned my submissions to see the answer but no so...	6
[Staff] number of attempts on last question. We have 4 choices and 5 attempts. Seems a bit too much :)	2
[Staff] Due Dates still not changed	3

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