How to Draw Contour Lines of a Multivariable Function

Original task 1 / independent drawing and calculation

Task 1

Draw contour lines for f(x,y)=x+y at c=-2,0,2 on a grid from -3 to 3. Label each line.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

How to Draw Contour Lines of a Multivariable Function

Original task 2 / independent drawing and calculation

Task 2

Draw contour lines for f(x,y)=xy at c=1 and c=-1 on a grid from -3 to 3, excluding x=0 and y=0. Label each branch.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

How to Draw Contour Lines of a Multivariable Function

Original task 3 / independent drawing and calculation

Task 3

Draw contour lines for f(x,y)=x^2+y^2 at c=0 and c=2 on a grid from -3 to 3. Explain what the c=0 contour is.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

How to Draw Contour Lines of a Multivariable Function

Original task 4 / independent drawing and calculation

Task 4

Draw contour lines for f(x,y)=y-x^2 at c=0 and c=1 on a grid from -2 to 2 in x and 0 to 5 in y. Label each parabola.

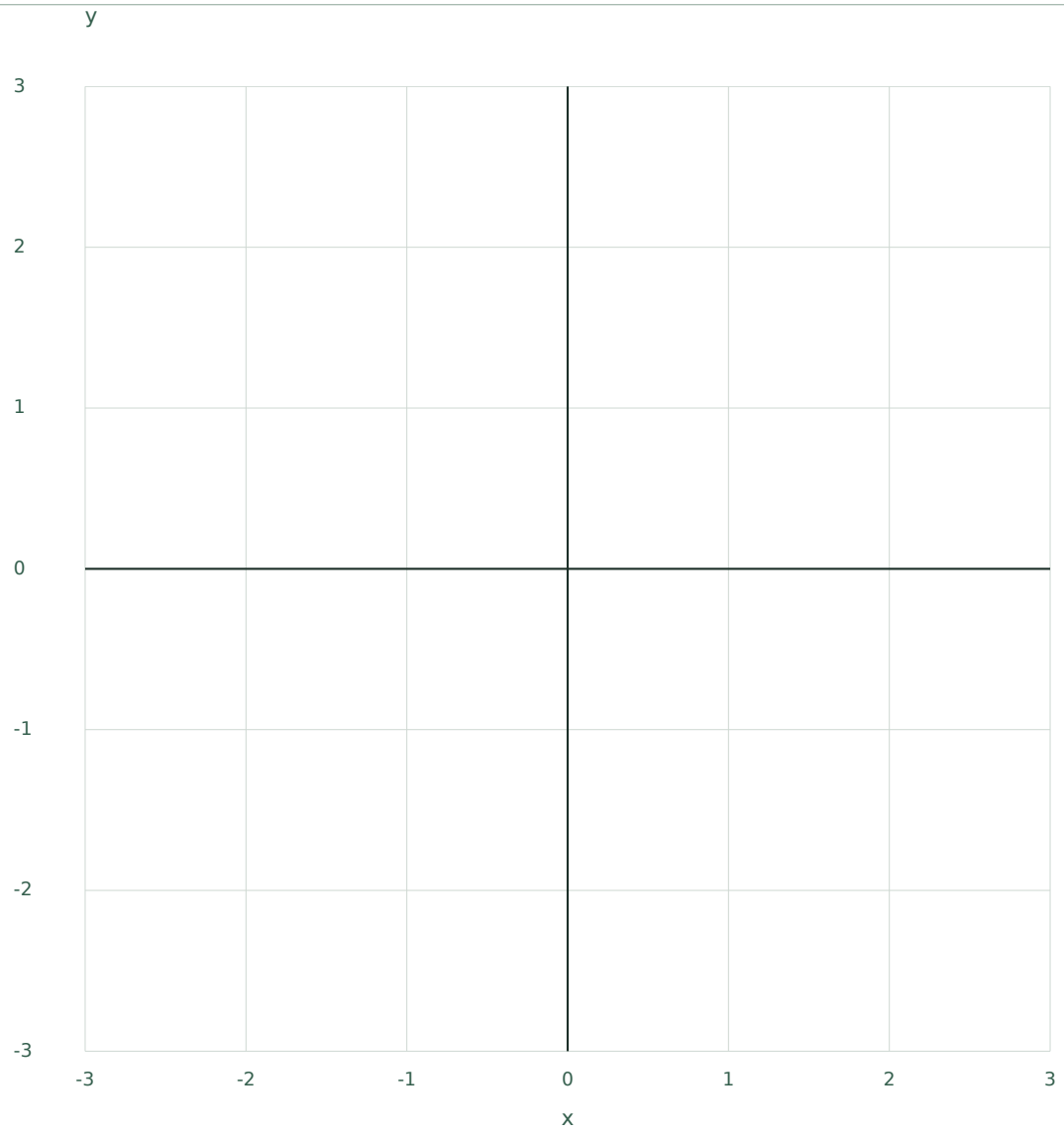
Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.

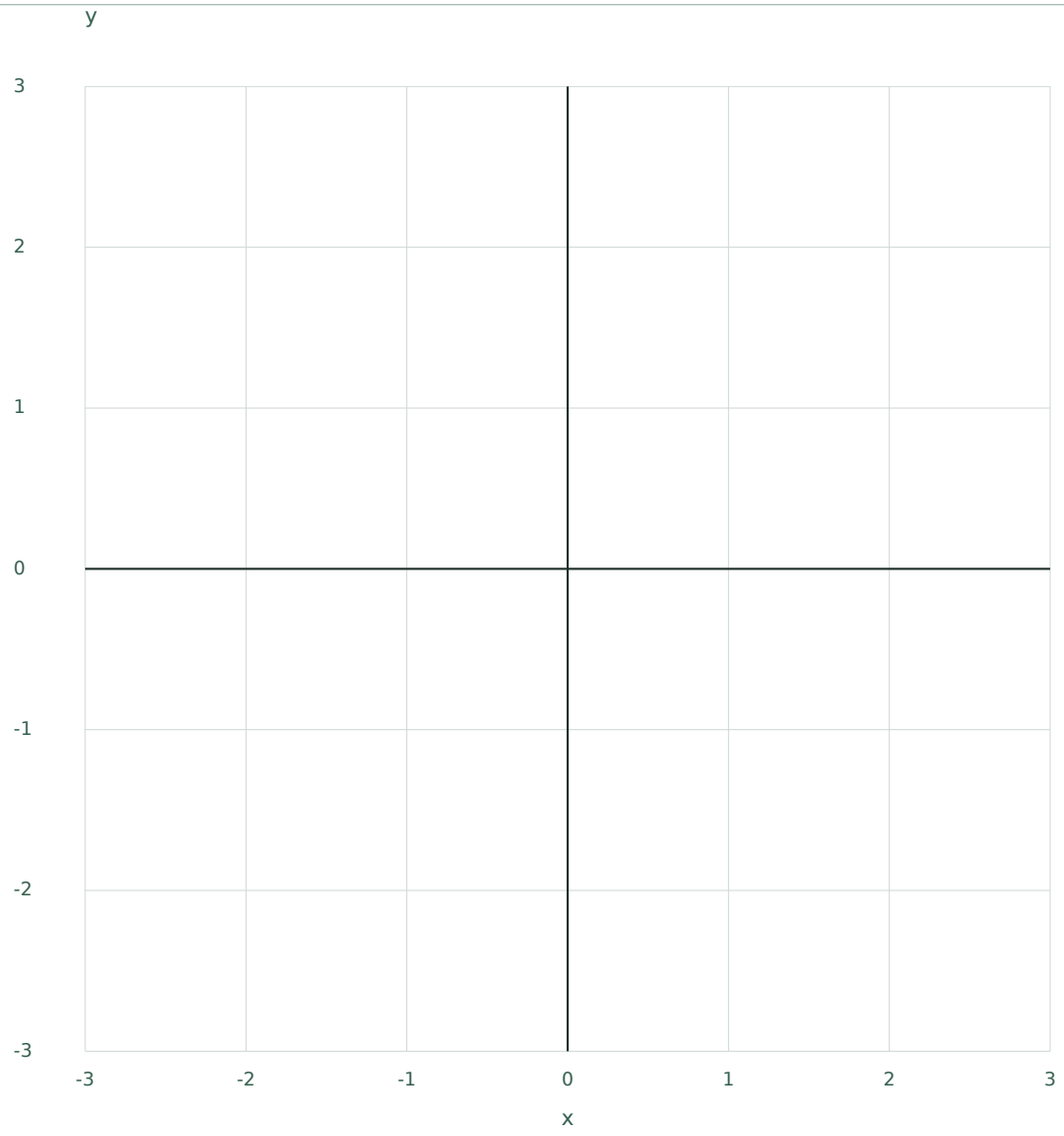
How to Draw Contour Lines of a Multivariable Function

Task 1 / blank plotting grid



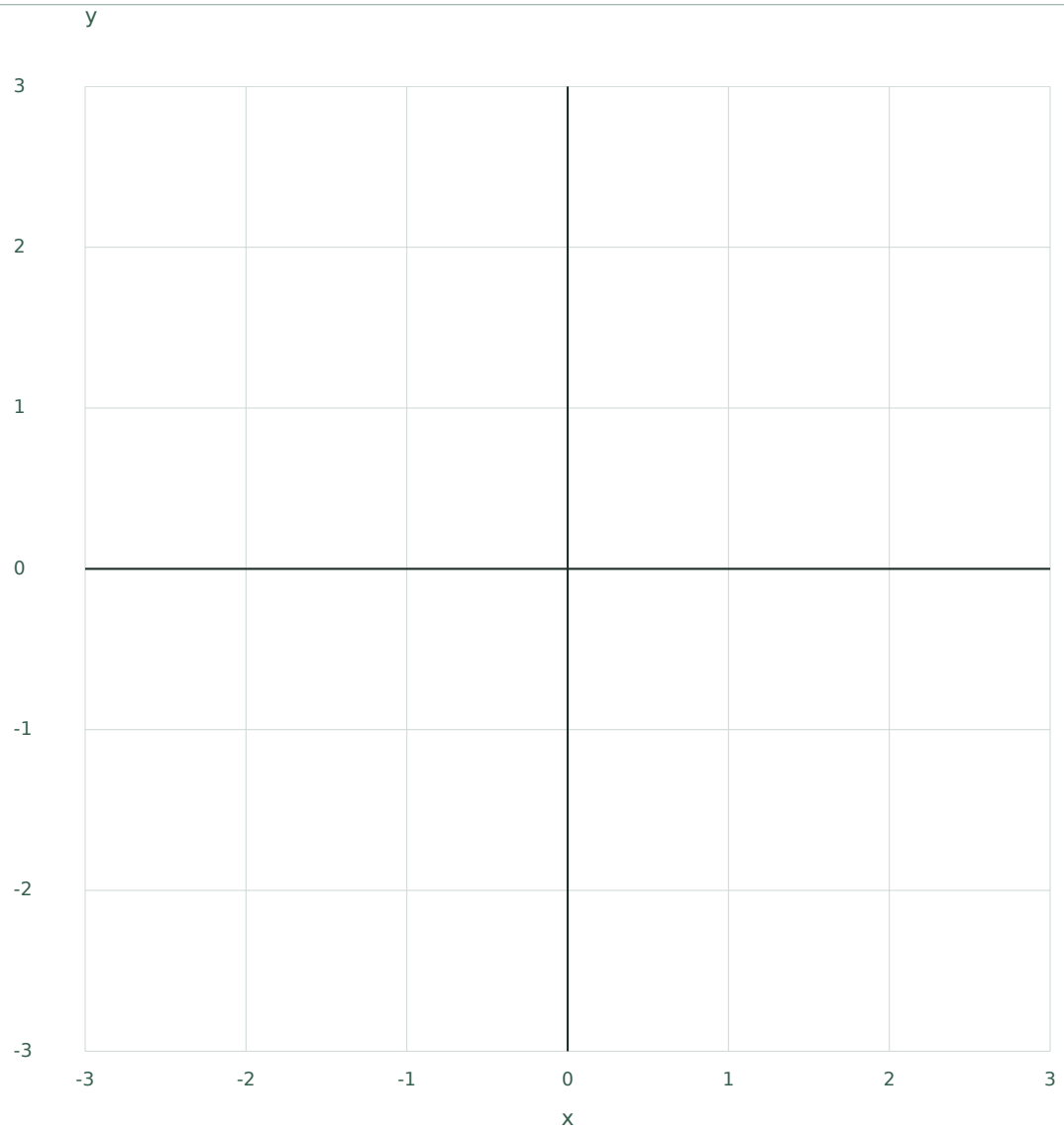
How to Draw Contour Lines of a Multivariable Function

Task 2 / blank plotting grid



How to Draw Contour Lines of a Multivariable Function

Task 3 / blank plotting grid



How to Draw Contour Lines of a Multivariable Function

Task 4 / blank plotting grid

