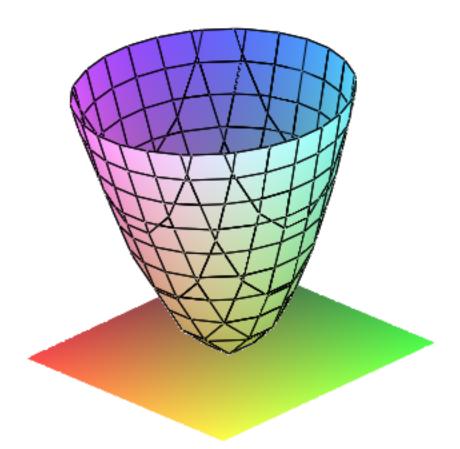
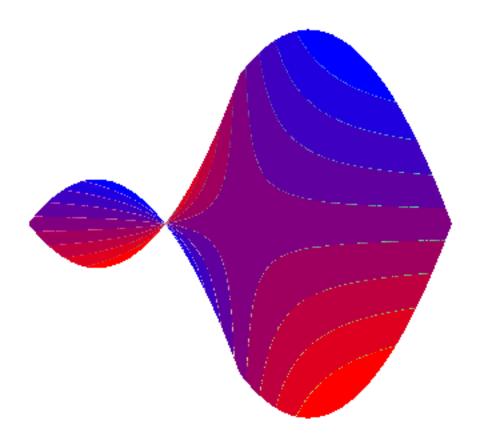
with(plots): $a := implicit plot 3d(z = x^2 + y^2, x = -1..1, y = -1..1, z = 0..1)$: b := animate(plot3d, [[x, y, A], x = -1..1, y = -1..1, style = wireframe], A = 0..1): $c := animate(spacecurve, ||t, \sqrt{A-t^2}, A|, t = -1 ...1, thickness = 3, color = blue|, A = 0 ...1)$: Warning, unable to evaluate the function to numeric values in the region; see the plotting command's help page to ensure the calling sequence is correct $d := animate(spacecurve, ||t, -\sqrt{A-t^2}, A|, t = -1..1, thickness = 3, color = blue|, A = 0..1)$: Marning, unable to evaluate the function to numeric values in the region; see the plotting command's help page to ensure the calling sequence is correct $e := animate(spacecurve, [[t, \sqrt{A-t^2}, 0], t=-1..1, thickness=3, color=blue], A=0..1):$ $e1 := animate(spacecurve, [[t, -\sqrt{A-t^2}, 0], t=-1..1, thickness=3, color=blue], A=0..1)$: Warning, unable to evaluate the function to numeric values in the region; see the plotting command's help page to ensure the calling sequence is correct Warning, unable to evaluate the function to numeric values in the region; see the plotting command's help page to ensure the calling sequence is correct f := plot3d([x, y, 0], x = -1..1, y = -1..1, style = patchnogrid):

display(a, b, c, d, e, e1, f)



with(plots): $contourplot3d(x^2-y^2, x=-1..1, y=-1..1, filled regions = true, coloring = [red, blue])$



with(plots): $a2 := animate(implicit plot 3d, [x^2 + y^2 - z^2 = A, x = -1 ..1, y = -1 ..1, z = -1 ..1], A = 0 ..1):$ $b2 := implicit plot 3d(x^2 + y^2 - z^2 = 0, x = -1 ..1, y = -1 ..1, z = -1 ..1, style = patchnogrid):$ display(a2, b2)

