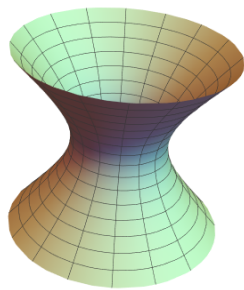




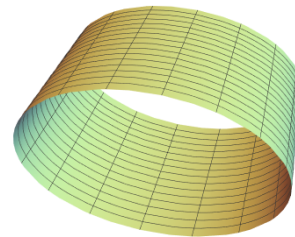
Quadric surfaces

Name _____ Date _____

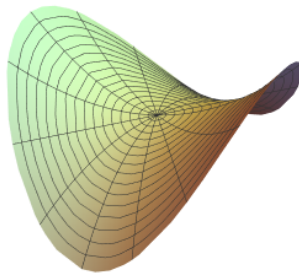
Recognize a quadric surface, write down a generic equation determining the surface, and describe its properties.



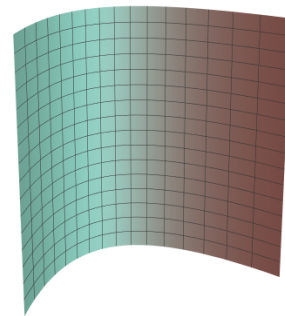
(1)



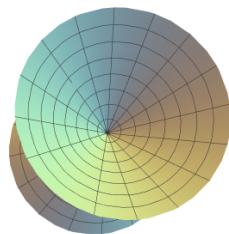
(2)



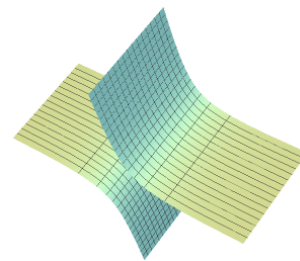
(3)



(4)



(5)



(6)



Answers

Recognize a quadric surface, write down a generic equation determining the surface, and describe it's properties.

- | | | |
|----------------------------|------------|-----------------------|
| (1) Hyperboloid of 1 sheet | <i>No</i> | $x^2 + y^2 - z^2 = 1$ |
| (2) Elliptic cylinder | <i>Yes</i> | $x^2 + y^2 - z = 0$ |
| (3) Hyperbolic paraboloid | <i>No</i> | $x^2 - y^2 - z = 0$ |
| (4) Parabolic cylinder | <i>Yes</i> | $x^2 - z = 0$ |
| (5) Elliptic cone | <i>Yes</i> | $x^2 + y^2 - z^2 = 0$ |
| (6) Hyperbolic cylinder | <i>Yes</i> | $x^2 - y^2 - z = 0$ |