

1. With the printed surface, determine how many traces are present (they are indicated with a raised bump). Do they all represent traces on the xy -plane, the yz -plane, and the xz -plane, or are some shifted? How can you tell?

2. Investigate the traces again on the printed surface. What basic curve does each trace represent?

3. This surface is a *hyperbolic paraboloid*, which is given by an equation of the form $z = \frac{x^2}{a^2} - \frac{y^2}{b^2}$. For the following traces, write the equation and identify the basic curve it represents:

(a) $x = 0$

(b) $y = 0$

(c) $z = 1$

4. Match the above traces with the physical traces on the printed surface!