Fall 2017 Exam 2 1:15 Number 4

The set of points in 3-space which satisfies
$$X^2 + Z^2 = Y^2.$$

when $Z = 0$ the equation is $X^2 = Y^2$ which is 2 lines.

when $X = 0$ the equation is $Z^2 = Y^2$ which is 2 lines

when $Y = 0$ the equation is $X^2 + Z^2 = 0$ which is one point

when Y is a non-zero constant then the graph is a circle

The graph is a cone