11) Find the angle between the planes $x + y + z = 1$, $x - y + z = 1$

$\vec{n}_1 = \langle 1, 1, 1 \rangle$

$\vec{n}_2 = \langle 1, -1, 1 \rangle$

ANGLE BETWEEN planes is the ANGLE BETWEEN NORMAL VECTORS

$$\cos\theta = \frac{\vec{n}_1 \cdot \vec{n}_2}{|\vec{n}_1||\vec{n}_2|} = \frac{1}{\sqrt{3} \cdot \sqrt{3}} = \frac{1}{3}$$
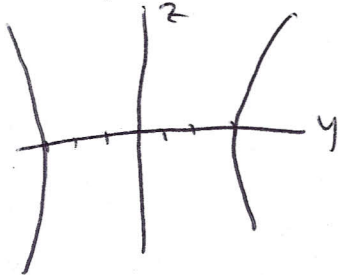
$$\theta \doteq 70.5°$$

12) Graph $\frac{x^2}{4} + \frac{y^2}{9} - \frac{z^2}{4} = 1$

$x = 0$

$$\frac{y^2}{9} - \frac{z^2}{4} = 1$$

hyperbola

$y = 0$
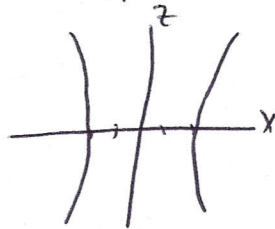
$$\frac{x^2}{4} - \frac{z^2}{4} = 1$$

hyperbola

$z = 0$

$$\frac{x^2}{4} + \frac{y^2}{9} = 1$$

ellipse