1.2.

$$h(x) = \text{Sign}(\omega^T x) = +1$$

$$\text{Sign}(\omega^T x) = -1$$

$$\omega^T x = 0$$

$$x_0 \omega_0 + x_1 \omega_1 + x_2 \omega_2 = 0$$

$$\omega_0 + x_1 \omega_1 + x_2 \omega_2 = 0$$

$$x_2 \omega_2 = -\omega_0 - x_1 \omega_1$$

This can be written as

$$x_2 \omega_2 = -x_1 \omega_1 - \omega_0$$

$$x_2 = \frac{-x_1 \omega_1 - \omega_0}{\omega_2}$$

Now, this is in the format of $y = mx + b$

Therefore the slope $\boxed{m = -\dfrac{\omega_1}{\omega_2}}$

Intercepts:

To find x_1-intercept

$\qquad$ set $x_2 = 0$

$$0 = \frac{-w_1 x_1 - w_0}{w_2}$$

$$-w_1 x_1 - w_0 = 0$$

$$-w_0 = w_1 x_1$$

$$\boxed{x_1 = \frac{-w_0}{w_1}} \implies \left(\frac{-w_0}{w_1}, 0\right)$$

To find x_2-intercept

$\qquad$ set $x_1 = 0$

$$x_2 = \frac{-w_1 x_1 - w_0}{w_2}$$

$$w_2 x_2 = -w_0 \implies \left(0, \frac{-w_0}{w_2}\right)$$

$$x_2 = \frac{-w_0}{w_2}$$