

Figure 3.2: The solution of the system is the point in common with each of the three planes.

The intersection  $H_i \cap H_j$  of any two distinct planes  $H_i$  and  $H_j$  is a line, and the intersection  $H_1 \cap H_2 \cap H_3$  of the three planes consists of the single point  $(1.4, -0.4, -0.4)$ , as illustrated in Figure 3.2.

The planes corresponding to the system

$$x_1 + 2x_2 - x_3 = 1$$

$$2x_1 + x_2 + x_3 = 2$$

$$x_1 - x_2 + 2x_3 = 3,$$

are illustrated in Figure 3.3.

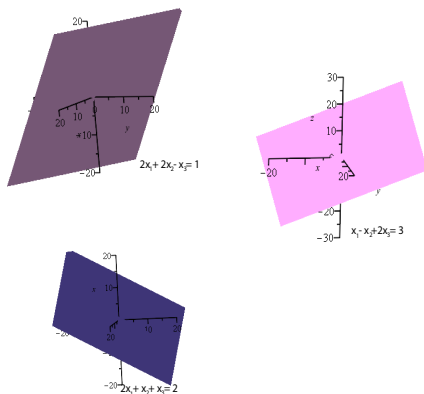


Figure 3.3: The planes defined by the equations  $x_1 + 2x_2 - x_3 = 1$ ,  $2x_1 + x_2 + x_3 = 2$ , and  $x_1 - x_2 + 2x_3 = 3$ .