Exercise 12.2.1

c.) Use $C = 1/2$

Start with $w = [0,0,0,0,0,0]$ and compute $w.a = 0$.

$\emptyset$ is not positive

$$w := w + (.5)(+1)\,a = [.5, .5, 0, .5, .5, -0.5]$$

Consider $w.b3 = 3/2$ not negative.

$$w := w + (.5)(-1)\,b = [.5, .5, 0, .5, .5, -.5] - [0, 0, .5, .5, .5]$$

$$= [.5, .5, -.5, 0, 0, 0]$$

Compute $w.c = 0$, not positive

$$w := w + (.5)(+1)\,c = [.5, .5, -.5, 0, 0, 0] + [0, .5, .5, 0, 0, -.5]$$

$$= [.5, 1, 0, 0, 0, -.5)$$

$w.d = 1$, not negative

$$w := w + (.5)(-1)\,d = [.5, 1, 0, 0, 0, .5] - [.5, 0, 0, .5, 0, -.5]$$

$$= [0, 1, 0, -.5, 0, 0]$$