1. Given the vectors $u$, $v$, and $w$ drawn below, estimate scalars $r$ and $s$ such that

$$w = ru + sv.$$ 

2. Let $u = [0, 1, 2, 1]$, $v = [-5, -3, 1, 2]$, and $w = [1, 6, -2, 0]$. Find $3u - v + 2w$. 

$$3u - v + 2w = [3(0), 3(1), 3(2), 3(1)] - [-5, -3, 1, 2] + 2[1, 6, -2, 0]$$

$$= [0, 3, 6, 3] + [5, 3, -1, -2] + [2, 12, -4, 0]$$

$$= [7, 18, 7, 7].$$