

Solution

$\mathbf{u}_1^T, \mathbf{v}^T$	[0.390 0.919 0.058],	[0.341 0.939 -0.035]
$\mathbf{u}_1^{*T}, \mathbf{v}^{*T}$	[0.019 0.032 0.999],	[0.422 0.514 0.748]
$\mathbf{m}_1^T, \mathbf{f}_1^T$	[17.119 32.620 -66.504],	[12.299 34.480 -63.545]
$\mathbf{m}_1^{*T}, \mathbf{f}_1^{*T}$	[10.681 -0.985 -30.472],	[-59.194 57.219 -31.049]