4.1 a) No if you spin a square it is still a square

b) yes unless it is uniform

c) (0,0) will remain unchanged

4.23 make a new vector say a such that equals the cross product of u and v and then make another vector b that is the cross products of a and u and b is the answer

4.21 a) True,

b)True

c)True

d)False

4.4 translation:

Rotation:

Scaling:

Shear:

6 degrees of freedom