

**Crystallography (winter semester 2017)**

**9. Homework 32 Point Groups**

1. Draw the symmetry diagrams for the trigonal crystal system

- a. Point Group  $32$
- b. Point Group  $3m$

2. Draw the symmetry diagrams for the tetragonal crystal system

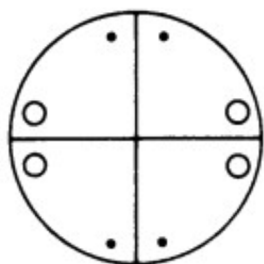
- a. Point Group  $422$
- b. Point Group  $4/m$

3. Draw the symmetry diagrams for the hexagonal crystal system

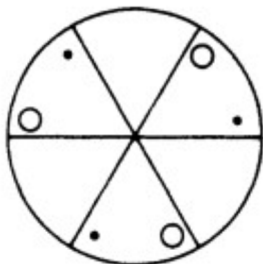
- a. Point Group  $6mm$
- b. Point Group  $6/m$
- c. Point Group  $622$

4. Define corresponding point groups for the depicted below symmetry diagrams:

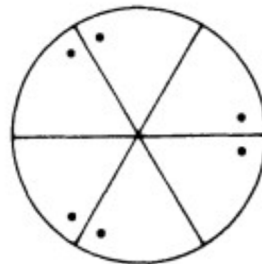
a.



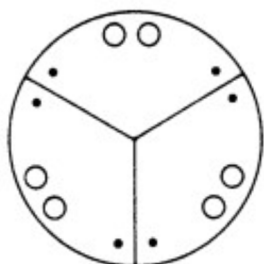
b.



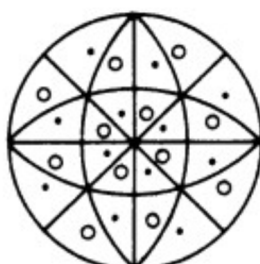
c.



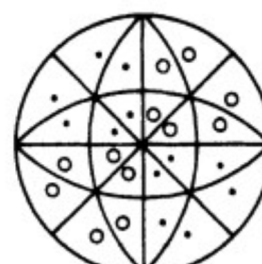
d.



e.



f.



Follow a link for visualization of the point groups

[http://materials.cmu.edu/degraeef/pg/pg\\_gif.html](http://materials.cmu.edu/degraeef/pg/pg_gif.html)