Please complete the following homework assignment on a separate piece of paper. It is due on March $2^{\text {nd }}$ at 9:00 am.

1. (a) Describe the symmetries of the figures below in words.
(b) Create a group table for the symmetry groups of the figures.
(c) What are the symmetry groups?

2. For each one of the following symmetry groups, draw a figure with those symmetries.
(a) $D_{6}$
(e) $D_{2}$
(b) $C_{4}$
(f) $C_{1}$
(c) $C_{7}$
(g) $C_{8}$
(d) $D_{4}$
(h) $D_{3}$

Of the above groups write down which are subgroups of another group that is listed?
3. On a separate piece of paper draw six regular octagons like the one below. Using both color and line, draw figures representing six different subgroups of the octagon. Label the symmetry group of each of your drawings. Be creative.


