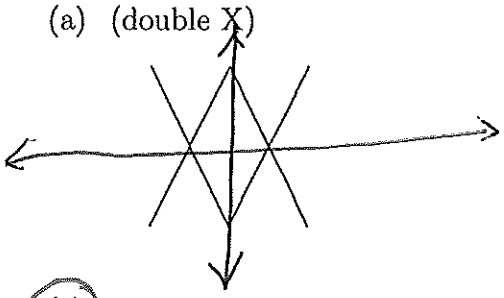
Key 6/5

Math 118 - Dr. Miller - Quiz #14: Two-Dimensional Symmetry - **In-Class Wednesday, 4/16/14**

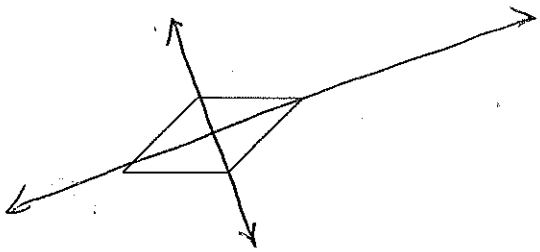
You MAY collaborate on this assignment.

1. Sketch all possible lines of symmetry for each figure below. (Some may have none.)

(a) (double X)

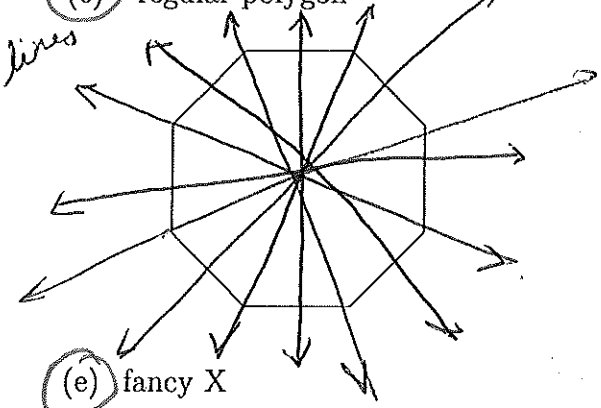


(b) (rhombus)

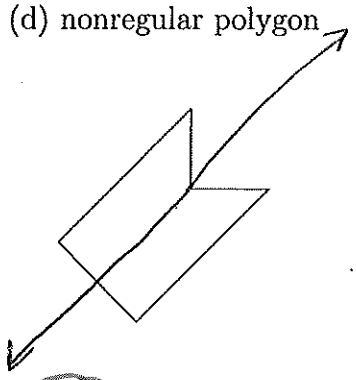


(c) regular polygon 1

8 lines

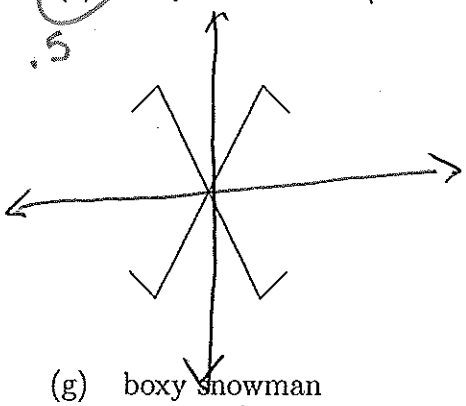


(d) nonregular polygon

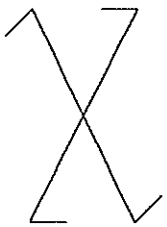


2/2

(e) fancy X .5



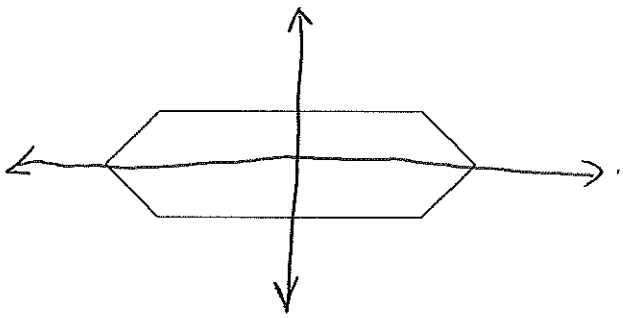
(f) another fancy X .5



more

(g) boxy snowman

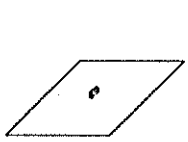
(h) nonregular polygon



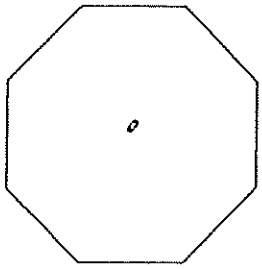
2. Mark the center of rotational symmetry for each figure below and specify the minimum number of degrees needed to demonstrate such symmetry. (Some may have none.)

(a) (double X)

(b) (rhombus)

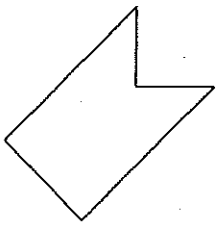


(c) regular polygon

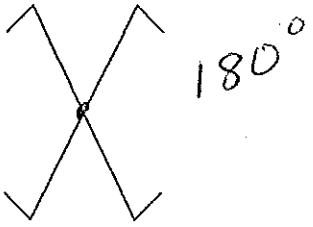


1.5
1.5

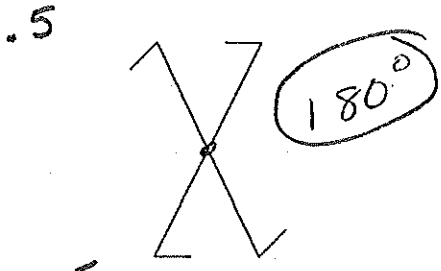
(d) nonregular polygon



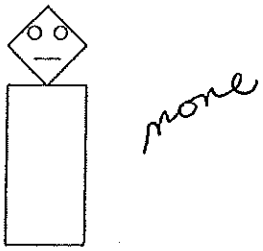
(e) fancy X



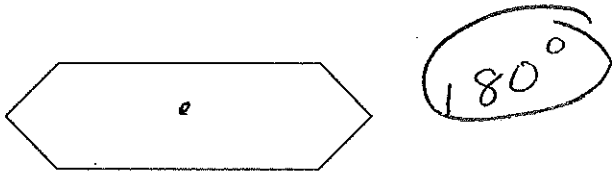
(f) another fancy X



(g) boxy snowman



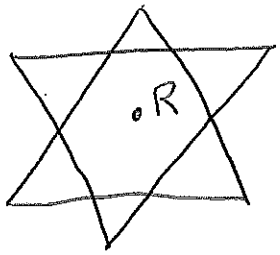
(h) nonregular polygon



3. Draw examples of figures that CLEARLY have the following combinations of symmetry. If not possible, say so.

(a) 60° rotational symmetry around a clearly marked point R

.5

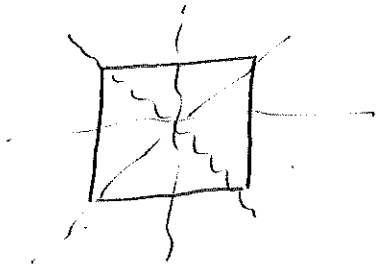


(b) Reflectional symmetry but no other kind of symmetry

1.5
1.5

.5

(c) Four concurrent lines of symmetry



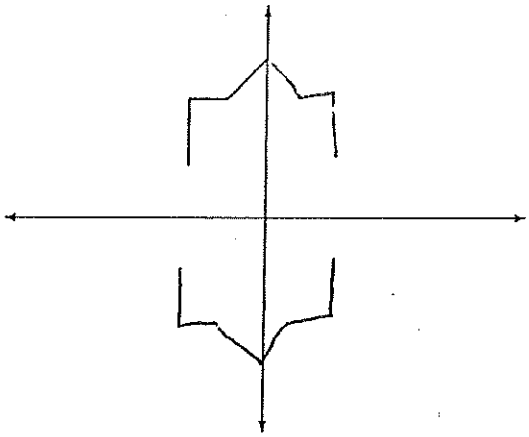
square

.5

(d) Rotational symmetry but not reflectional symmetry

(pinwheel)

4. Complete the diagram below so that both lines are lines of symmetry.



5. Complete the diagram below so that it has 90° rotational symmetry around point P.