Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_

Teacher\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class\_\_\_\_\_\_\_\_\_\_\_

**Reflectional and Rotational Symmetry: Quadrilaterals and Regular Polygons**

|  |  |  |
| --- | --- | --- |
| A. Square | B. Isosceles Trapezoid | C. Parallelogram |
| D. Regular Hexagon | E. Regular Octagon | F. Equilateral Triangle |
| G. Regular Dodecagon | H. Regular Pentagon | I. Regular Decagon |

**Part A:** Write the letters of the shapes that best answer the questions: Which shapes map onto themselves after:

1. rotations of 180o about the center of the shape?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. rotations of 36o about the center of the shape?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. rotations of 240o about the center of the shape?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part B:** Choose four shapes from the table above. Draw all axes of symmetry on the shape. Find all of the angles of rotation that map the shape onto itself when it is rotated about its center. Write all of the angles for each shape in the boxes below:

|  |  |
| --- | --- |
| Shape \_\_\_\_\_\_ | Shape \_\_\_\_\_\_\_ |
| Shape \_\_\_\_\_\_\_ | Shape \_\_\_\_\_\_\_ |