Name _____ Date _____
Mr. Schlansky Geometry

Regular Polygon Rotations

1. What is the minimum number of degrees a regular decagon must be rotated to be mapped onto itself?

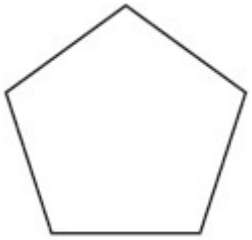
2. What is the minimum number of degrees a regular hexagon must be rotated to be carried onto itself?

3. If a regular pentagon is rotated clockwise around its center, the minimum number of degrees it must be rotated to map onto itself is
1) 54º
2) 72º
3) 108º
4) 360º

4. Which regular polygon has a minimum rotation of 45° to carry the polygon onto itself?
1) octagon 3) hexagon
2) nonagon 4) pentagon

5. Which regular polygon has a minimum rotation of 40° to carry the polygon onto itself?
1) nonagon 3) hexagon
2) decagon 4) pentagon

6. The regular polygon below is rotated about its center. Which angle of rotation will carry the figure onto itself?



1) 60°
2) 108°
3) 216°
4) 540°

7. Which rotation would map a regular hexagon onto itself?

1) 45º
2) 150º
3) 240º
4) 315º

8. Which rotation about its center will carry a regular decagon onto itself?

1) 54°
2) 162°
3) 198°
4) 252°

9. Which rotation about its center will carry a regular octagon onto itself?

1) 80°
2) 315°
3) 280°
4) 120°

10. Which of the following rotations would not map a regular pentagon onto itself?

1) 144
2) 120
3) 216
4) 720

11. Which of the following rotations would not map an equilateral triangle onto itself?

1) 120º
2) 240º
3) 180º
4) 480º

12. Which figure will *not* carry onto itself after a 120-degree rotation about its center?

1) equilateral triangle
2) regular hexagon
3) regular octagon
4) regular nonagon