# Rotational Symmetry – Notes

**Line of Symmetry:**

* A line of reflection where the figure is folded so that the two halves match exactly

**Example 1**: Draw the Lines of Symmetry for each figure

**Point of Symmetry:**

* A common point of reflection for all points on the figure

**Example 2**: Draw the Points of Symmetry for each figure

**Rotational Symmetry:**

* A figure has rotational symmetry if it can be rotated less than 360° about a point so that the image and the preimage match exactly
* The “***order***” of rotational symmetry is the number of times it can be rotated
* The “***magnitude***” of rotational symmetry is the number of degrees the figure is rotated each time

1

2

3

4

5

6

1

2

3

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5

6

1

2

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5

6

1

3

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 Order = \_\_\_\_\_\_\_\_\_ Magnitude = \_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_

# of Lines of Symmetry = Order of Symmetry

360°/(Order of Symmetry) = Magnitude

**Example 3**: Does the figure have Rotational Symmetry? If so, what is the Order and Magnitude?

 Yes/No Yes/No Yes/No Yes/No

Order = \_\_\_\_\_ Order = \_\_\_\_\_ Order = \_\_\_\_\_ Order = \_\_\_\_\_

Magnitude = \_\_\_\_\_ Magnitude = \_\_\_\_\_ Magnitude = \_\_\_\_\_ Magnitude = \_\_\_\_\_

**Example 4**: Equilateral Triangle:

1. Number of Lines of Symmetry = \_\_\_\_\_\_
2. Is there a Point of Symmetry? Yes/No
3. Is there Rotational Symmetry? Yes/No
4. Order = \_\_\_\_\_\_
5. Magnitude = \_\_\_\_\_\_

**Example 5**: Rectangle:

1. Number of Lines of Symmetry = \_\_\_\_\_\_
2. Is there a Point of Symmetry? Yes/No
3. Is there Rotational Symmetry? Yes/No
4. Order = \_\_\_\_\_\_
5. Magnitude = \_\_\_\_\_\_

**Example 6**: Arrows:

1. Number of Lines of Symmetry = \_\_\_\_\_\_
2. Is there a Point of Symmetry? Yes/No
3. Is there Rotational Symmetry? Yes/No
4. Order = \_\_\_\_\_\_
5. Magnitude = \_\_\_\_\_\_