MA111 — The Mathematics of Symmetry

Properties of the Four Motions

Reflections

1. A reflection is completely determined by _____.

2. A reflection is completely determined by _____.

3. A reflection has _____ fixed point(s), located _____.

4. Is a reflection a proper or improper motion?

5. _____ is equivalent to the identity motion.

Rotations

1. A rotation is completely determined by _____.

2. A rotation has _____ fixed point(s), located _____.

3. Is a rotation a proper or improper motion?

4. _____ is equivalent to the identity motion.

Translations

1. A translation is completely determined by _____.

2. A translation has _____ fixed point(s), located _____.

3. Is a translation a proper or improper motion?

4. _____ is equivalent to the identity motion.

Glide Reflections

1. A glide reflection is completely determined by _____.

2. A glide reflection has _____ fixed point(s), located _____.

3. Is a glide reflection a proper or improper motion?

4. _____ is equivalent to the identity motion.