

$$\sigma_1 \sigma_1^{-1} = \text{Diagram 1} = \text{Diagram 2} = \text{Diagram 3} = \text{Diagram 4}$$

The image displays a sequence of five diagrams connected by equals signs, representing a sequence of transformations in a diagrammatic algebra. The diagrams are as follows:

- Diagram 1:** The algebraic expression  $\sigma_1 \sigma_1^{-1}$ .
- Diagram 2:** A diagram consisting of two curved lines that cross each other twice, forming a full twist (a braid with two crossings).
- Diagram 3:** A diagram consisting of two parallel vertical lines.
- Diagram 4:** A diagram consisting of two parallel vertical lines, identical to Diagram 3.
- Diagram 5:** A diagram consisting of two parallel vertical lines, identical to Diagram 3.