## Lesson 2: Naming the Moves

Let’s be more precise about describing moves of figures in the plane.

### 2.1: A Pair of Quadrilaterals

Quadrilateral A can be rotated into the position of Quadrilateral B.



Estimate the angle of rotation.

### 2.2: How Did You Make That Move?

Here is another set of dance moves.



1. Describe each move or say if it is a new move.
	1. Frame 1 to Frame 2.
	2. Frame 2 to Frame 3.
	3. Frame 3 to Frame 4.
	4. Frame 4 to Frame 5.
	5. Frame 5 to Frame 6.
2. How would you describe the new move?

### 2.3: Card Sort: Move

Your teacher will give you a set of cards. Sort the cards into categories according to the type of move they show. Be prepared to describe each category and why it is different from the others.

### Lesson 2 Summary

Here are the moves we have learned about so far:

* A **translation** slides a figure without turning it. Every point in the figure goes the same distance in the same direction. For example, Figure A was translated down and to the left, as shown by the arrows. Figure B is a translation of Figure A.
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* A **rotation** turns a figure about a point, called the center of the rotation. Every point on the figure goes in a circle around the center and makes the same angle. The rotation can be **clockwise**, going in the same direction as the hands of a clock, or **counterclockwise**, going in the other direction. For example, Figure A was rotated $45^{∘}$ clockwise around its bottom vertex. Figure C is a rotation of Figure A.
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* A **reflection** places points on the opposite side of a reflection line. The mirror image is a backwards copy of the original figure. The reflection line shows where the mirror should stand. For example, Figure A was reflected across the dotted line. Figure D is a reflection of Figure A.
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We use the word *image* to describe the new figure created by moving the original figure. If one point on the original figure moves to another point on the new figure, we call them *corresponding* points.



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