

Shapes

Did You Know? Objects move because there is force acting upon them. A force is a push or pull on an object. If an object is moving, then the forces acting on the object are unbalanced. For example, when you throw a ball, the force of your arm pushing is greater than the outside forces. If an object is not moving, the forces are balanced. For example, a coin resting on a desk does not move because the force of gravity and the force of the table are equal.



The class is conducting an experiment on forces. Each student is given the description of a shape to make. Then each student will use a string to pull his or her shape along the ground and determine the force.

- 1 Raphael's shape is a quadrilateral with opposite sides that are the same length. Draw a possible shape Raphael could have made. Is there more than one type of quadrilateral that would correctly match the description? Explain.

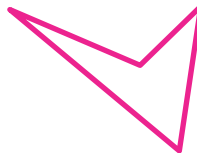
Sample drawing given.



Yes; Sample answer: Raphael could have made a square, rectangle, rhombus, or parallelogram.

- 2 Kamara's shape is a concave quadrilateral with all sides of different lengths. Draw a possible quadrilateral Kamara could have made.

Sample drawing given.



- 3 Is there any other shape that Kamara could have made? Explain.

Yes; Sample answer: Kamara could have made any concave figure with 4 unequal sides.

- 4 **Extension** Write the description of a new shape for the project. Then draw the shape.

Check students' work.