

MÖBIUS STRIP WORKSHEET

Mathematical Idea

A twisted loop is very different from a normal loop.

Materials Needed

Strips of paper, sticky tape, scissors and a pen

Construction

Take a strip of paper and some sticky tape. Turn the paper into a loop, but before you stick it down, flip one end of the paper over. This should give you a piece of paper with a half-twist in it. This is a Möbius Strip.

Strange Properties

How many sides does a Möbius strip have? Can you draw a line on your Möbius strip that eventually reaches the “other side”? How many edges does the Möbius strip have?

If you make a small incision and cut down the middle of the Möbius strip, predict what will happen. Go ahead and test your prediction.

Double Twist

Create another loop with two half-twists. How many sides and edges does this shape have? If we cut a line down the middle of the loop, what object will we get? Check your prediction. What about three twists?

Challenge

Make two Möbius Strips, one with a clockwise half-twist, one with a counter-clockwise half-twist. Tape (or glue?) them together at a right angle. What will happen if we cut down the middle of both Möbius strips? Check your prediction.

