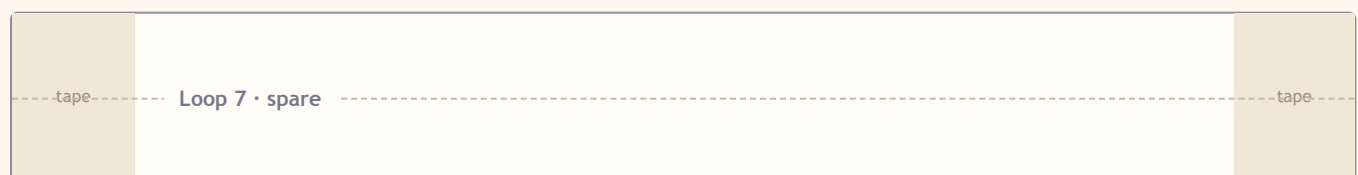
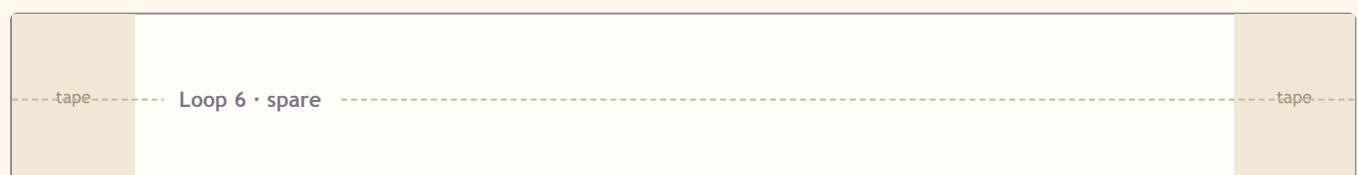
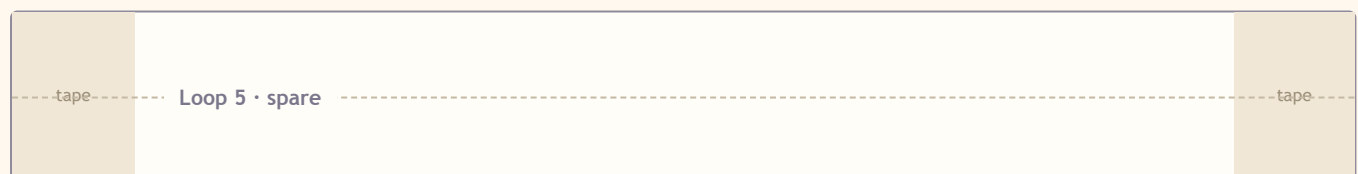
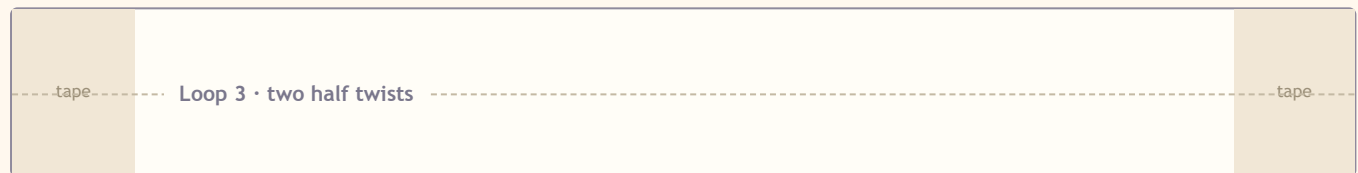
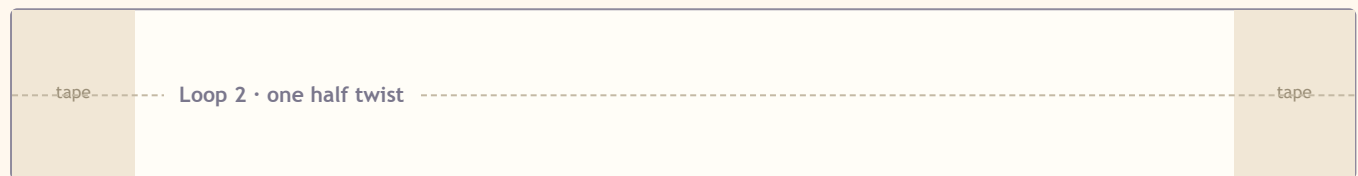
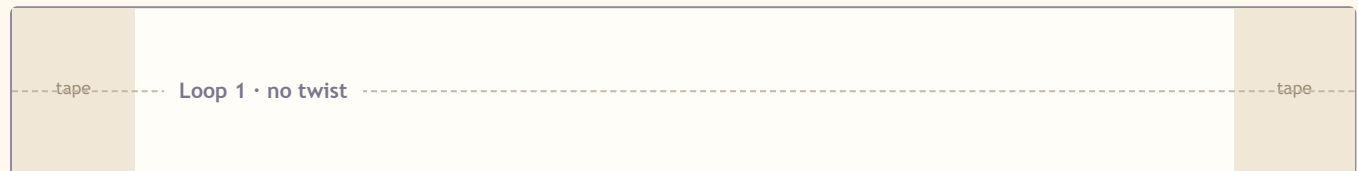


Möbius strip: paper with one side

Cut out the strips along the outer lines. Tape the shaded tabs together to make a loop, giving the paper the number of half twists you want before you tape it. The dashed line is where you draw, and later where you cut.

- Give the strip a half twist by flipping one end over once before you tape it.
- Use thick paper if you have it, and overlap the tabs so the joint is strong.
- Draw with the strip resting on the table and turn the loop under the pencil, rather than moving your hand.



Guess first, then find out

Write down what you think will happen before you do each step. Being wrong is the interesting part: it means you have learned something new.

What you do	What I think will happen	What actually happened
No twist: draw a line along the middle without lifting the pencil. Where does the line end up?		
No twist: cut along the dashed line all the way round.		
One half twist: draw a line along the middle without lifting the pencil. How much of the paper does it cover?		
One half twist: cut along the dashed line all the way round. How many loops do you get?		
Cut that new loop down the middle again. What now?		
Two half twists: cut along the dashed line all the way round.		

Count them

Loop with no twist	sides: _____	edges: _____
Loop with one half twist	sides: _____	edges: _____

For the grown-up. No twist: the line runs along one side only and the other side stays clean, and cutting gives two separate rings. One half twist: the line covers the whole surface and comes back to the start, because a Möbius strip has only one side and one edge, and cutting it gives a single loop twice as long with four half twists. Cutting that loop again gives two loops linked through each other. Two half twists: cutting gives two rings, linked like a chain.