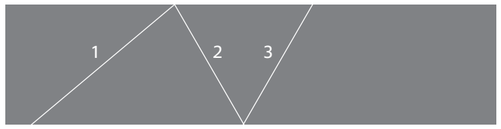
Mirror, mirror on the wall…

Own activity

Paper strip folding exercise

Fold a strip of paper randomly from the lower to the upper edge (fold 1).

Now fold the strip in such a way (fold 2) that fold 1 lies on the **upper** edge of the strip. Then fold the strip in such a way (fold 3) that fold 2 lies on the **lower** edge of the strip.



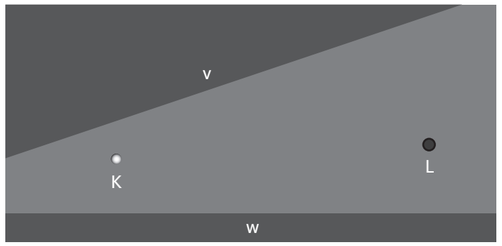
1. **Continue alternately in** this manner. What can you observe? Do you have an explanation?

By the way, this folding process is a good example of the convergence of a mathematical iteration.

2. **What does a** plane mirror exchange?
a) left and right
b) up and down
c) front and back

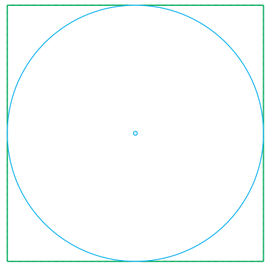
3. **How tall must** a vertical plane mirror be at least so that you can see all of you in it?

4. **You approach a** large plane mirror at a speed of one kilometre per hour. What is the speed of your mirror image towards you?



5. **A ball K** should be put into the hole L on the shortest path possible. However, before entering the hole it must touch the two borders v and w. In what direction would you have to push the ball? Construct your idea.

Inversion across a circle



Invert the square across the inscribed inversion circle.

6. **How does the** inverted image of a straight line that runs through the centre of the inversion circle look?

7. **Is the centre** of a circle imaged to the centre of the inversion circle?