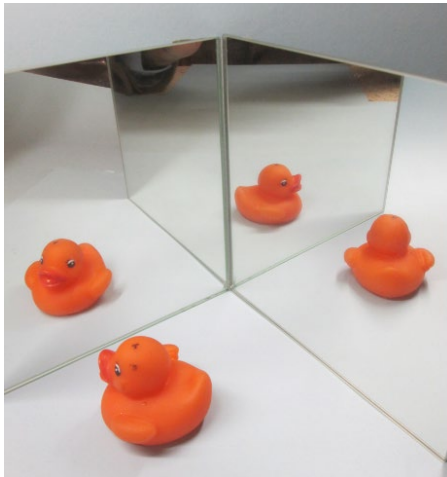


## Reflections in 2 mirrors (Post Primary)

**Read it -- Try it safely -- Explore it further**

A person looking into a mirror sees an image of themselves.

If 2 mirrors are placed at right angles as shown, how many images would you see?



Answer: 3 images.

One in front of you,  
one to the side  
and one in the corner of the mirrors.

In total, there are 4 ducks in the photograph  
-- the duck herself, and her 3 images.

Move the mirrors to make an angle of  $60^\circ$  and look to see how many ducks will be visible?

Angle between mirrors	$90^\circ$	$60^\circ$	$45^\circ$	$30^\circ$	
Number of ducks	4				

Move the mirrors to make an angle of  $45^\circ$  and record how many ducks are visible?

### Extension activity

Predict how many ducks can be seen when the mirrors make an angle of  $30^\circ$ ?

Test your prediction by experiment.

Can you give a formula for calculating how many ducks are seen for other angles, example  $20^\circ$ ?