

TWO MIRROR MAGIC

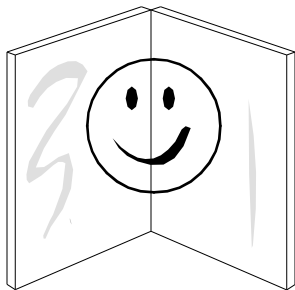
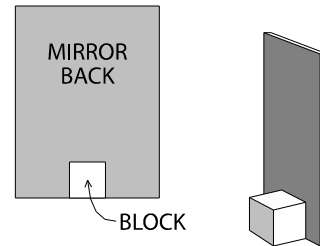
AMAZING MIRROR FACT:

THIS DOUBLE MIRROR SHOWS YOU HOW YOU **REALLY LOOK** TO OTHER PEOPLE, WHILE A REGULAR MIRROR **REVERSES** YOUR IMAGE!

WHAT YOU NEED:

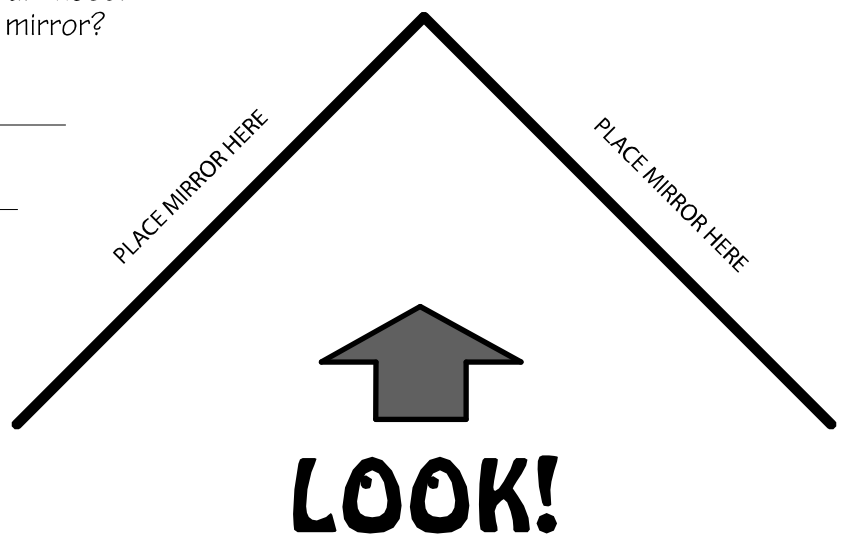
2 plastic mirrors, 2 wooden blocks, a bit of sticky-tack and a colored bead.

WHAT TO DO: Using a little bit of sticky-tack, attach each mirror to a wooden block so the mirrors stand straight up against the blocks. Then place the mirrors on the lines below.



Move your face down to the level of the table and look at your reflection in the corner. Does your face look normal? If not, adjust the mirrors until you look about right.

Now touch the right side of your nose. What strange thing happens in the mirror?

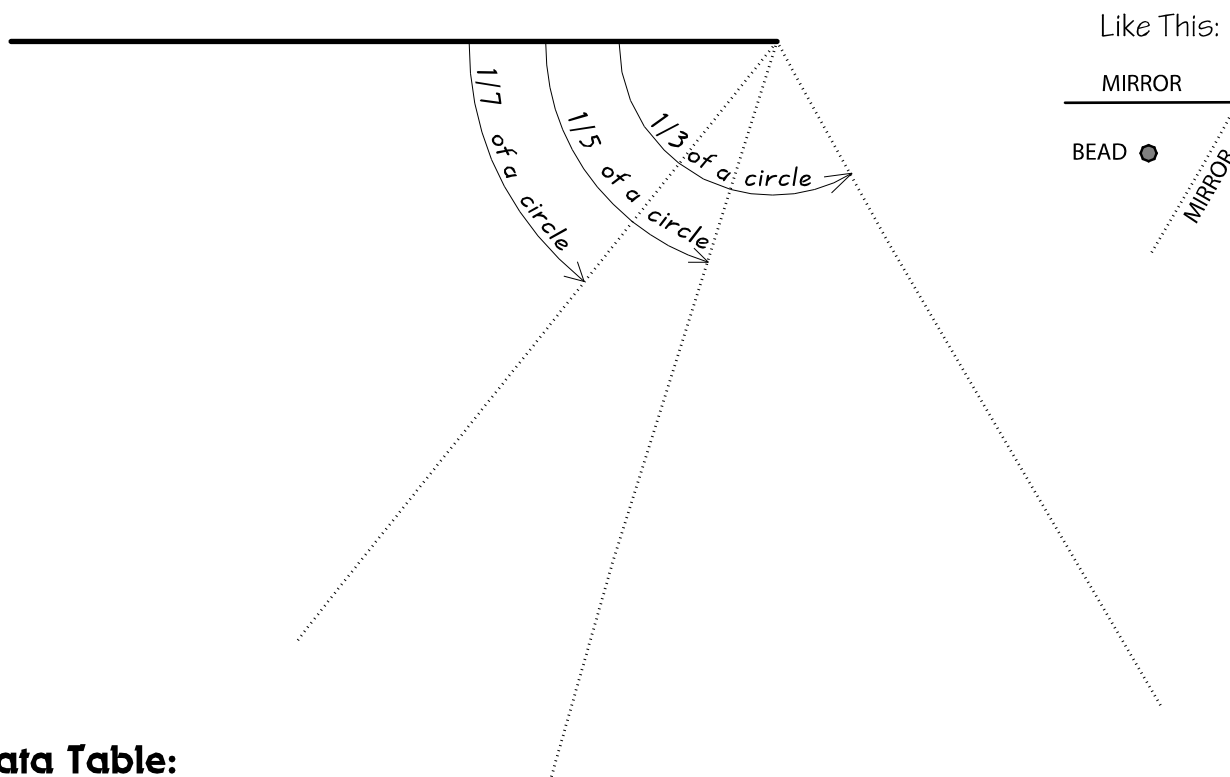


Why should this happen?

Here's a hint : With a double mirror, you are looking at the reflection of your reflection.

KALEIDOSCOPIIC EFFECTS

Attach the blocks to the long sides of the mirrors for this experiment. Place the first mirror on the solid line, and the second mirror on one of the dotted lines. Set the bead in the middle of the space between the mirrors.



Data Table:

Record how many images of the bead you can see in the mirrors. Try again at the other two angles.

Angle Between the Mirrors	Number of Images in the Mirrors	+ 1 Object = (the bead)	Total Beads You See
1/3 circle		+ 1 =	
1/5 circle		+ 1 =	
1/7 circle		+ 1 =	

Be sure to look from every angle so you don't miss any of the reflections.

Conclusion: Study your results from the data table, looking for patterns. Based on your pattern, how many total beads would you see if the angle was $1/9$ of a circle?

Squeeze the mirrors together to get as many bead images as you can. What's the limit? If you could shrink and stand between the mirrors, would there be a limit?