

Q1. Let's Make Patterns from a Drop of Colour**Activity:**

- Fold a paper in half.
- Drop some colour on the fold.
- Press the fold and then open.


Answer:

You will get a symmetrical design.

 **Now the question:** Can you cut the pattern in such a way that you get two mirror halves?

- Yes, if the ink spreads evenly, you can cut along the **middle fold** to get mirror halves.
 - You can cut:
 - **Vertically** (along the fold)
 - **Horizontally**, or
 - **Diagonally** if symmetrical
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Q2. Which shapes are divided into two mirror halves by the dotted line?


 Refer to the page with numbered shapes (like 1 to 15).

Answer:

- **Mirror halves** are found when folding the shape on the dotted line gives equal matching parts.
 - **Correct mirror halves shapes** include:
 - Shape **1, 3, 4, 6, 8, 11** (if exact symmetric in shape and colour)
 - Some shapes (like **10, 12**) look symmetrical, but are not due to **colour mismatch**.
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Q3. Mirror Games (Figure to mirror image)

Example:

 Given a shape (a dog, or pattern), and asked:

- **Where to keep the mirror?**
- **Which part will be hidden?**

Answer Steps:

1. Look at the mirror line shown.
 2. Match the final shape to its **reflection**.
 3. The part on the **opposite side** of the mirror is reflected.
 4. The part on the **same side** is **hidden**.
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Q4. Half Turn – Which shapes look same after a half turn (180°)?**Answer:**

- These shapes **look same** even after rotating 180°:
 - Words: **ZOOM, NOON, SWIMS**
 - Numbers: **0, 1, 6, 8, 9** (in digital font)
 - Shapes: Circles, some triangles, stars, etc.

◆ **Q5. Mirror Line Activity (Make the figure using a mirror line)**

You are asked:

- Look at a given shape.
- Where would you place the mirror so the reflection makes the second shape?

✔ **Steps:**

1. Identify the **line of symmetry**.
 2. If the second shape is a **mirror image**, place the mirror on the **mid-line** between shapes.
 3. Draw a line to show this mirror.
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◆ **Q6. Symmetry in Words and Numbers**

✔ **Answer:**

- **Mirror symmetric words:** MOM, WOW, TUT
 - **Half-turn same words:** NOON, SWIMS
 - **Mirror symmetric numbers:** 0, 1, 8
 - **Half-turn same numbers:** 0, 1, 6 (flips to 9), 9 (flips to 6), 8
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◆ **Q7. Patterns That Don't Match Mirror Rule**

➡ Find the picture which **breaks** the mirror rule.

✔ **Answer:**

- If the reflected part does **not match** in shape or colour, it **breaks** the mirror rule.
 - Circle such figures and correct by **redrawing the missing/mismatched side**.
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Summary Table:

Concept	Example or Tip
Mirror halves	Equal parts on either side of fold
Symmetrical shape	Fold covers exactly
Half turn same	ZOOM, 69, 96, 88
Mirror lines in objects	Left-right face symmetry
Symmetry error detection	Shape not matching in design/colour