

Line Symmetry

An object is said to be **symmetric** if each half of the object is the mirror image of the other half.



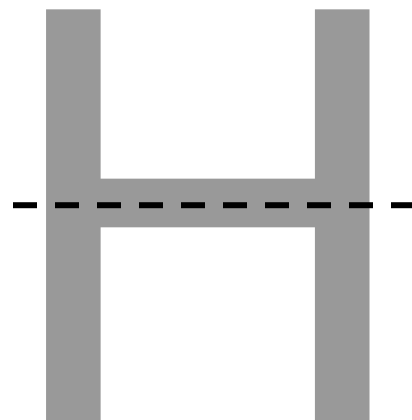
Task 1 - Symmetry of the Letter H

Place the MIRA on the dotted line with the **beveled edge** towards you.

Look through the MIRA.

The **reflection** of the bottom half lies on top of the first half. H is said to be **symmetric**. The dotted line is called a **line of symmetry** or an **axis of symmetry**.

Neatly draw a capital H in your notebook. Draw in all lines of symmetry. How many did you find?



Task 2 - Symmetry of the Letters of the Alphabet

Work in a small group (to share the work). Your job is to answer these questions. Do all of your work in your notebook.

Which letters of the alphabet have a line of symmetry?

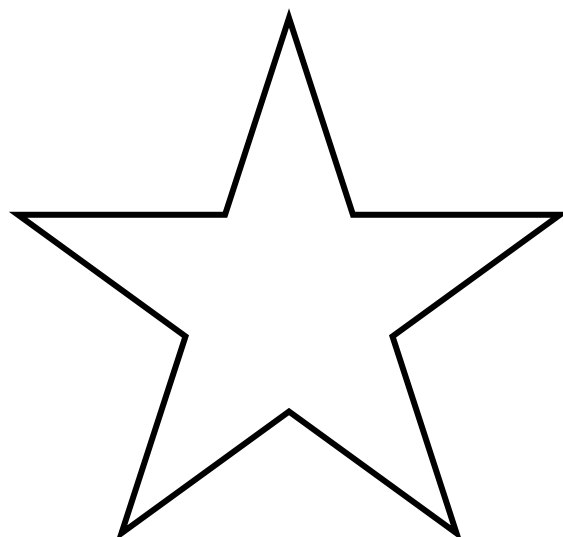
Which letters of the alphabet have more than one line of symmetry?

Which letter of the alphabet has the most lines of symmetry?

Task 3 - Symmetry of a Pentagon

The mathematical name for a 5-pointed star is a **pentagram**.

How many axes of symmetry does this pentagram have?



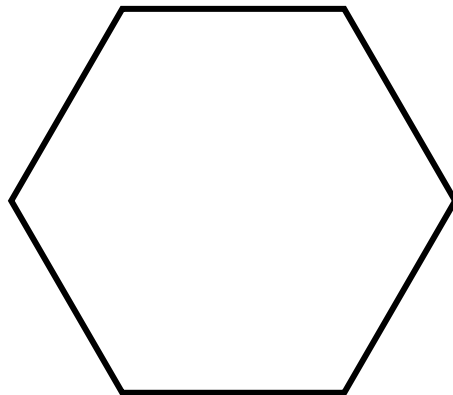
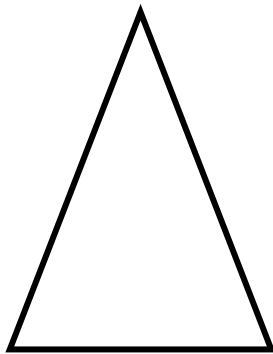
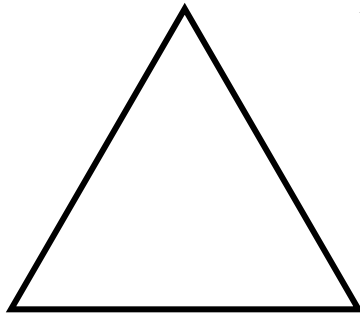
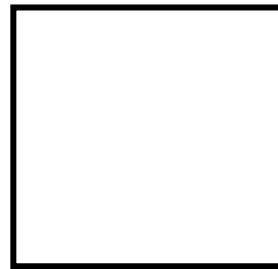
Task 4 - Symmetry of Geometric Objects

Trace these shapes in your notebook.

Underneath each, write the *most specific name* of the shape.

Find all of the lines of symmetry. You may wish to use a MIRA to help you find the lines of symmetry, or to check your answers.

Sketch each line of symmetry in your notebook (*not on this sheet*).



Task 5 - Challenge!

The words HEED and MOM each have a remarkable property - the entire word has line symmetry!

--HEED--

MOM

What other words can you find that have this remarkable property?

A B C D

E F G H

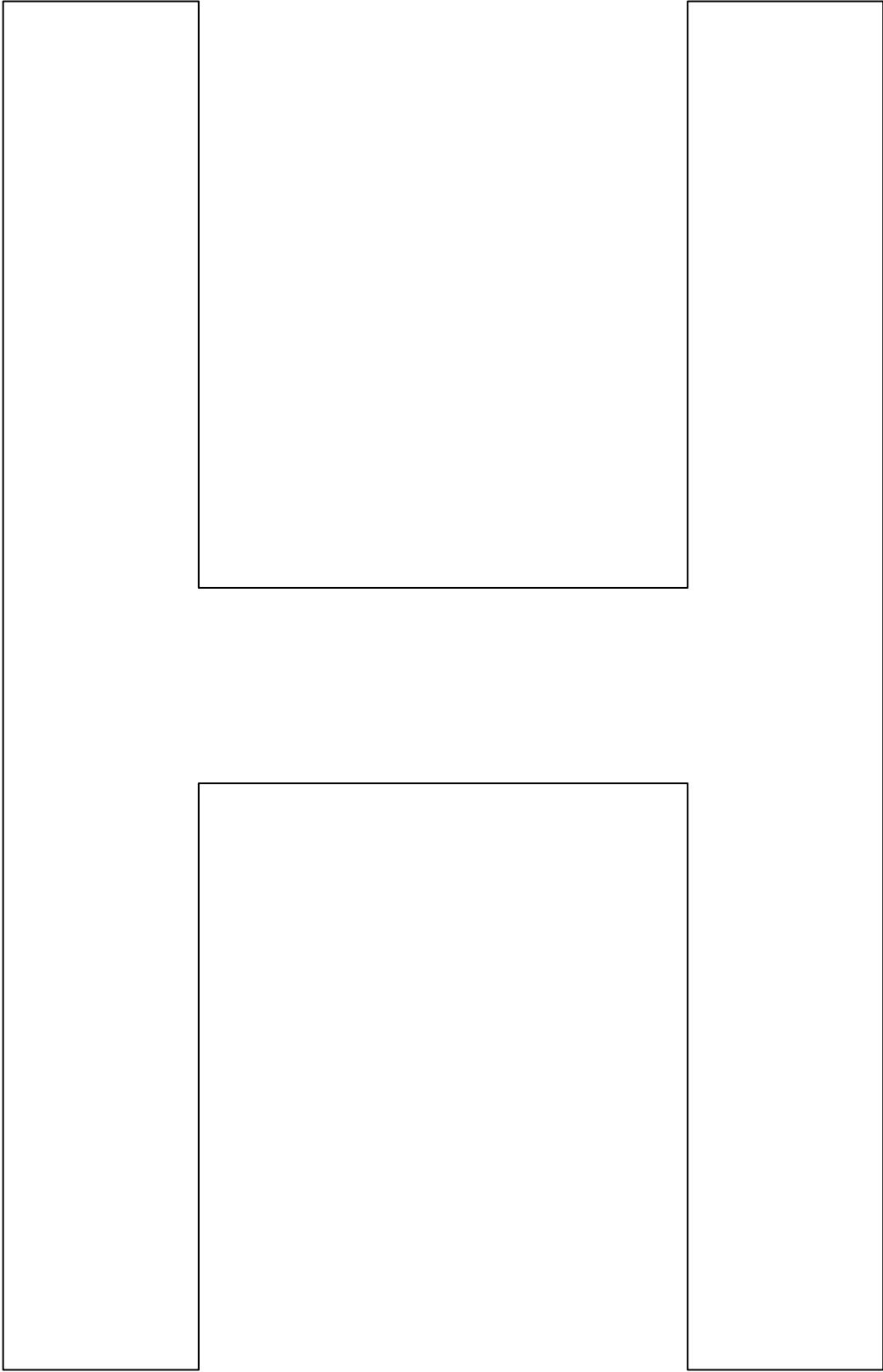
I J K L

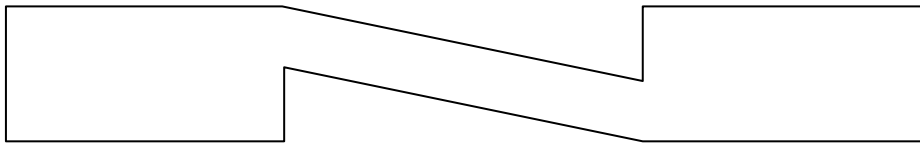
M N O P

Q R S T

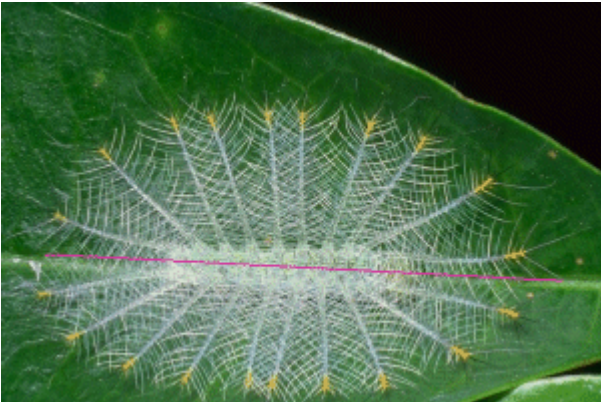
U V W

X Y Z





Photos of Objects that Have Lines of Symmetry



Are faces symmetric?



A huge collection of photographs on symmetry can be found by visiting google.com, selecting [Images] and searching for symmetry.