

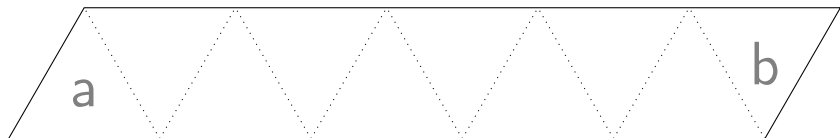
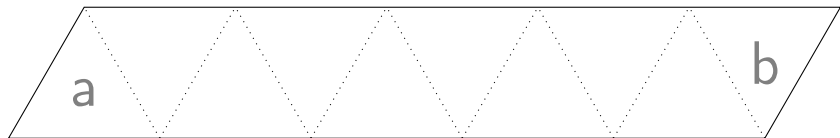
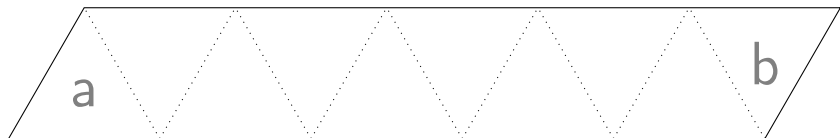
# Flexagons for year 8

Maths Jam  
21st November 2021

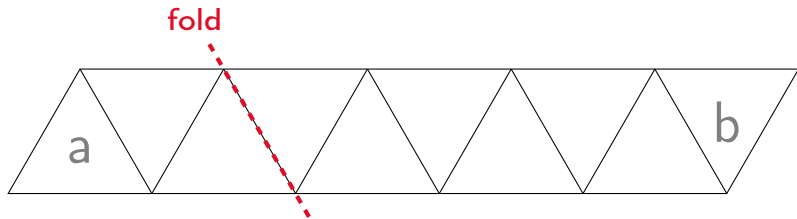
Francis Hunt (Francis.H.Hunt@gmail.com)

## Trihexaflexagon templates

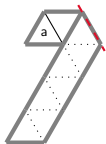
You'll just need one, and there are two spare to give to friends



# Trihexaflexagon Instructions: 1

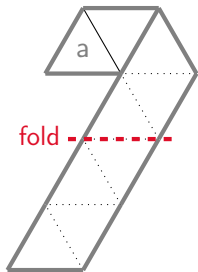


1. Cut out your strip of ten triangles.
2. Fold and unfold along each of the internal crease lines.
3. Fold along the **red** dotted line, right hand bit **coming forward**.



## Trihexaflexagon Instructions: 2

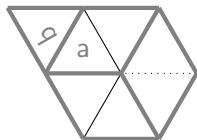
4. Fold along the **red** dotted line, lower bit **coming forward** covering triangle a



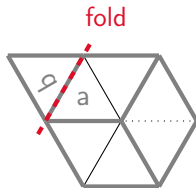
to get



5. Bring triangle a in front of the left hand strip.

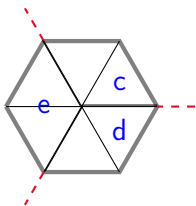


6. Finally, fold triangle b over and glue to triangle a, and decorate.

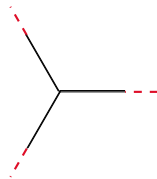


# Flexing your trihexaflexagon

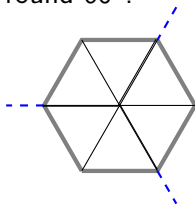
1. There are three pockets in your flexagon, marked here with red dashed lines.



2. With right hand finger and thumb on triangles **c** and **d**, pinch these together and push down on edge **e** with the left hand finger to form a Y shape.



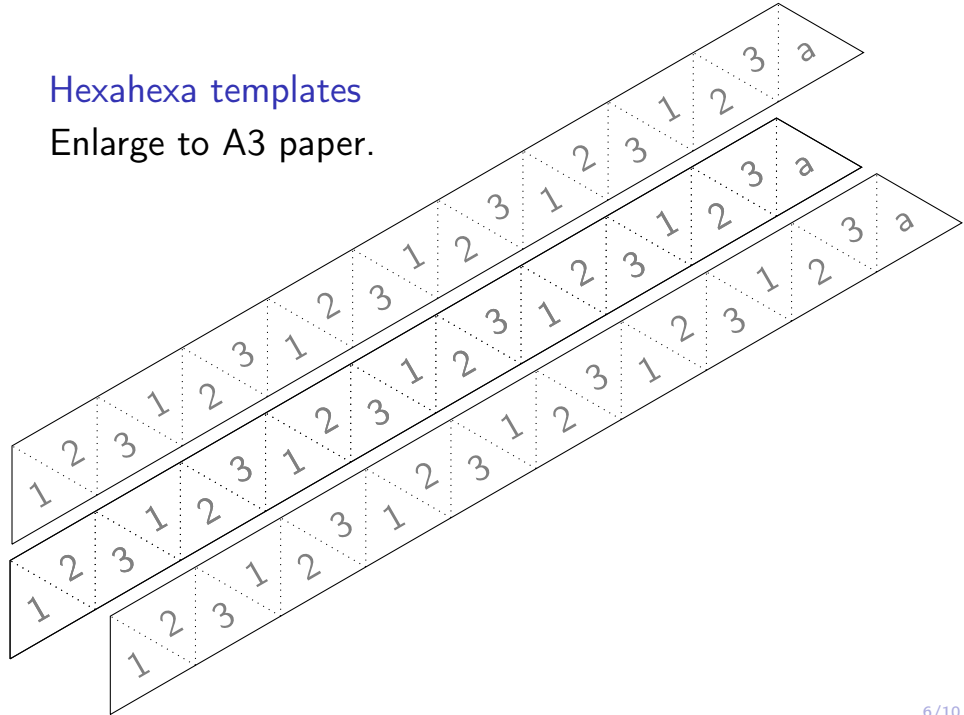
3. Open out at the centre to reveal a new face — note that the pockets have moved round  $60^\circ$ .



4. Repeat steps 1 to 3.

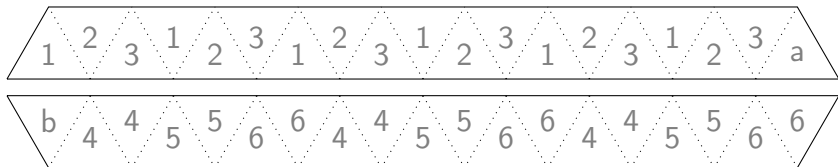
## Hexahexa templates

Enlarge to A3 paper.



# Hexahexaflexagon instructions: 1

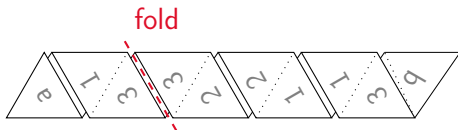
1. Cut out and prefold the creases of your strip.



2. Turn it over and number the back as in the lower strip.  
(The numbers on the front of the strip are already printed on, as shown in the upper strip.)

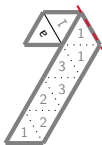
## Hexahexaflexagon instructions: 2

3. Fold the underside so that neighbouring 4s fold on each other, and similarly neighbouring 5s and 6s. It will create a spiralled strip as shown below.



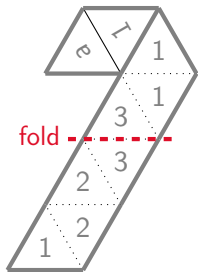
This looks like the trihexa strip, and we fold it the same way.

4. Fold along the red dotted line, right hand bit coming forward.

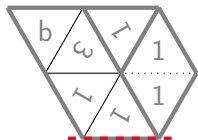


## Hexahexaflexagon Instructions: 3

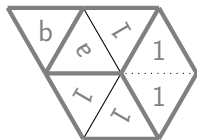
5. Fold along the red dotted line, lower bit coming forward covering triangle a



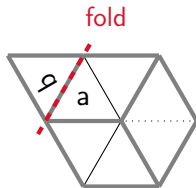
to get



6. Bring triangle a in front of the left hand strip.



7. Finally, fold triangle b over and glue to triangle a, and decorate.



## Flexing your hexahexaflexagon

- You flex your hexahexa just like your trihexa.
- On some faces there are six pockets that open, giving you two different ways to flex it.
- Can you find all six faces?