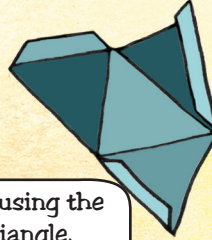


Making the tetrahedron

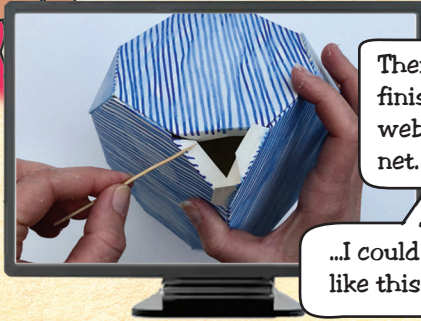
Build the tetrahedron.
Exploring the Platonic solids.



I'm going to make a desk sized tetrahedron like Zac's. I can make it by folding it up from a net drawing.

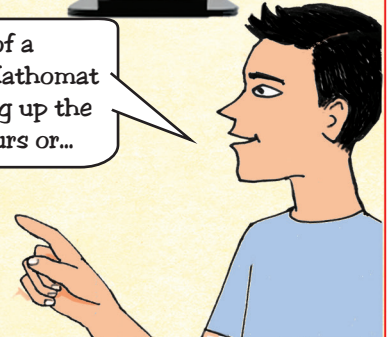


I'm going to draw the net using the 20mm sided equilateral triangle, shape 5 on Mathomat V7.



There's a really good picture of a finished tetrahedron on the Mathomat website, as well as for drawing up the net. I like the pastel card colours or...

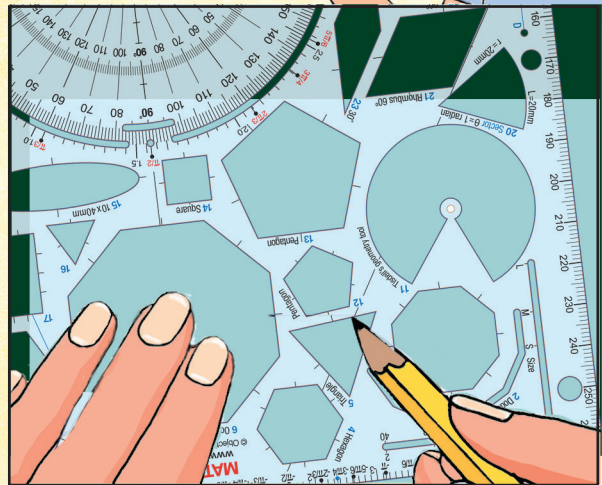
...I could colour my model like this truncated cube.



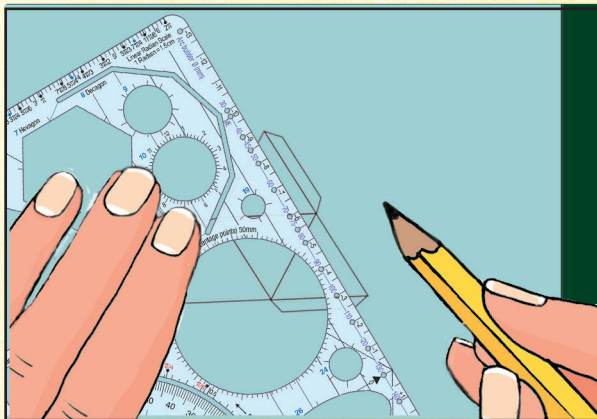
Zac looks at other models on the Mathomat site to decide on colour ideas.

The net of the tetrahedron and the other five platonic solids can be accurately drawn directly using shapes from the Mathomat template.

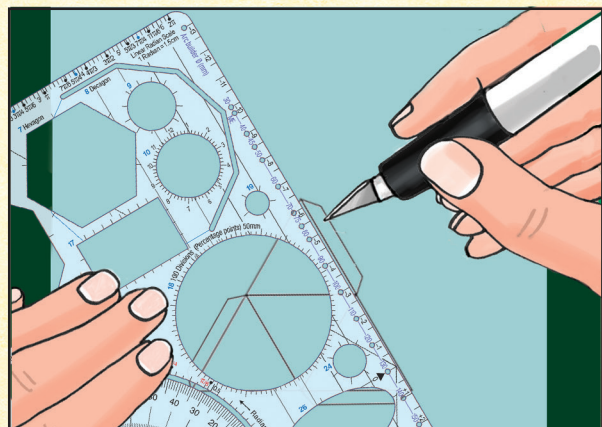
This solid only requires four equilateral triangles, and is an excellent one to start with. Illustrated here is the V7 being used to make a small model with the equilateral triangle (shape 5).



1. Use a sharp pencil, draw the first triangle on strong paper (150 gms), in the centre of the page.

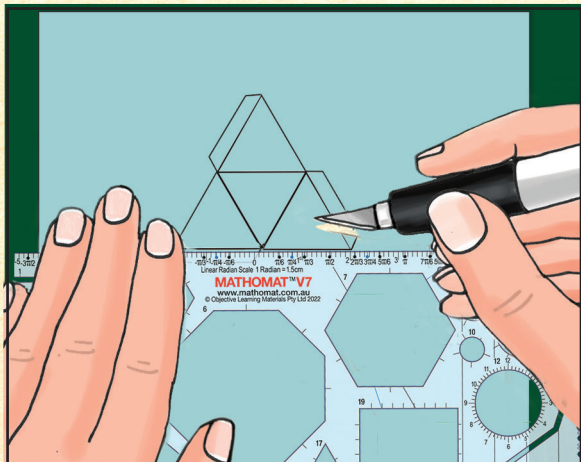


2. Add the tabs using the ruler edge of the template, checking the parallel markings as guides. Taper them at sharp angles.

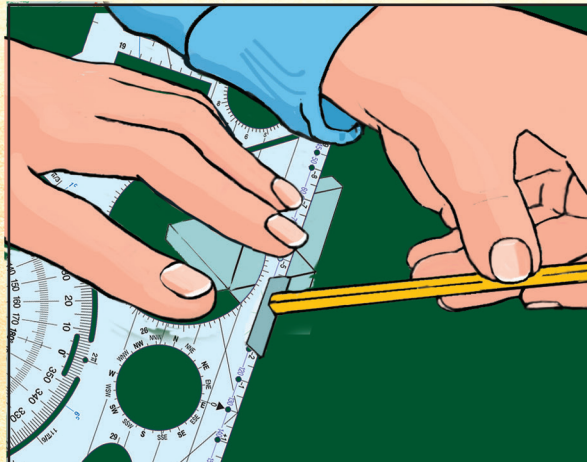


3. Score the fold lines with a hard point: a scissor edge or back of a craft pen blade against the edge.

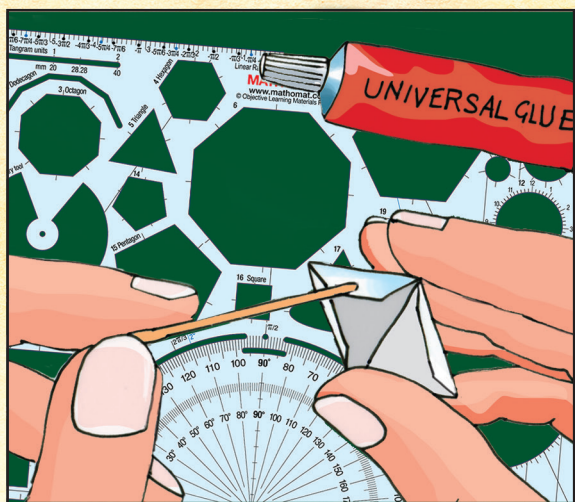
Making the tetrahedron continued



4. Using a craft knife (or scissors) cut out the net. If applying a knife, work on a cutting mat. You do not have to press too hard; use a metal edge or the Mathomat to keep steady.



5. The end of a pencil can be used to press the tabs up. Use the Mathomat edge to make clean folds, which can be sharpened with the end of your pencil in the same way.



6. Use a thin piece of card or small stick to apply the glue to each tab in turn, then press to its side and hold for a few seconds (do not be tempted to glue all the tabs at once).

You will need:

- A Mathomat template
- Good quality paper (150 to 180gms weight): if lighter paper, you can strengthen the finished model by varnishing it with PVA glue
- A cutting mat
- A sharp pencil
- A craft knife with a fresh blade, or scissors
- Glue (a universal contact adhesive glue is ideal, as it allows a second or two for adjustment).

