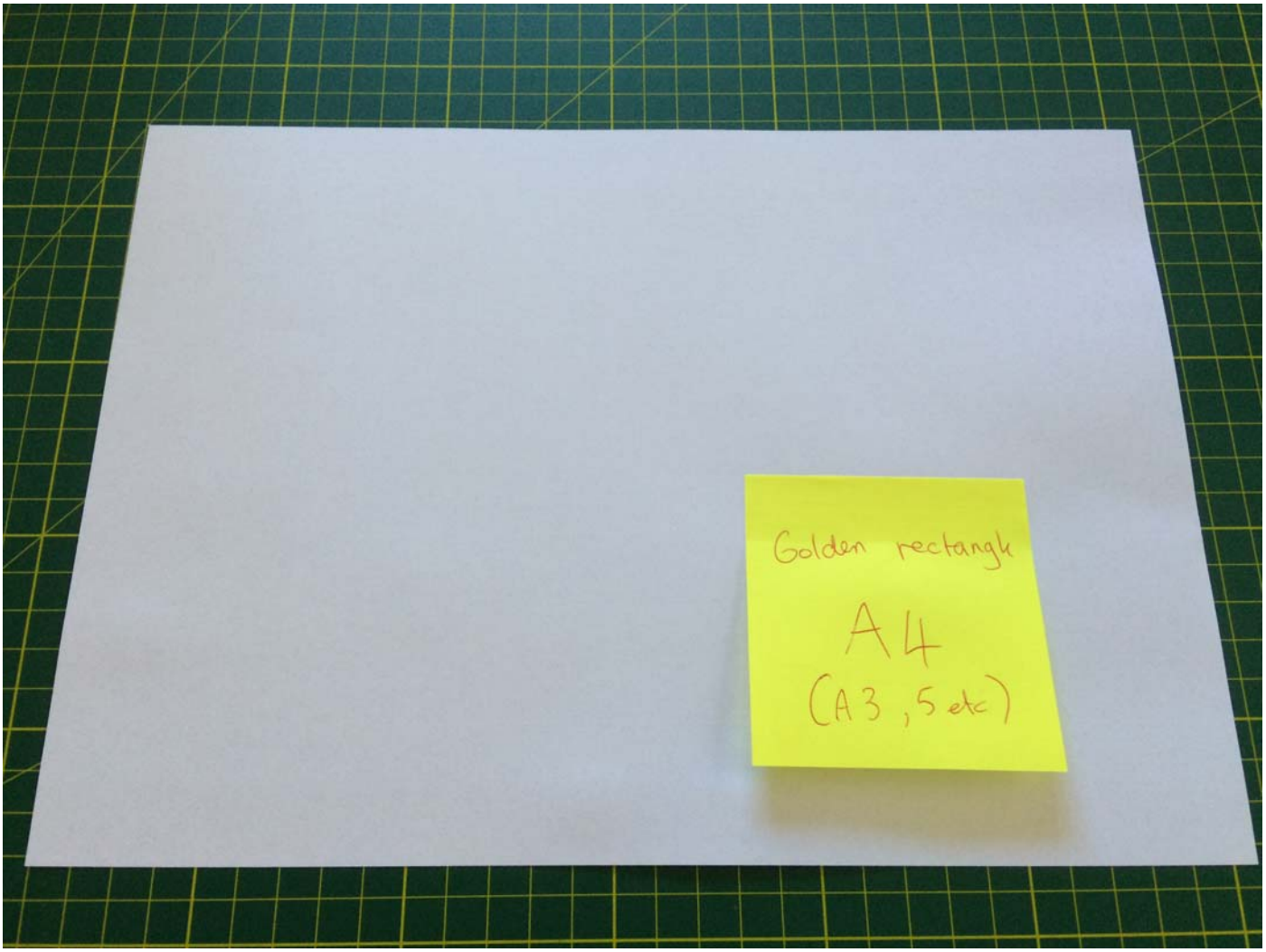
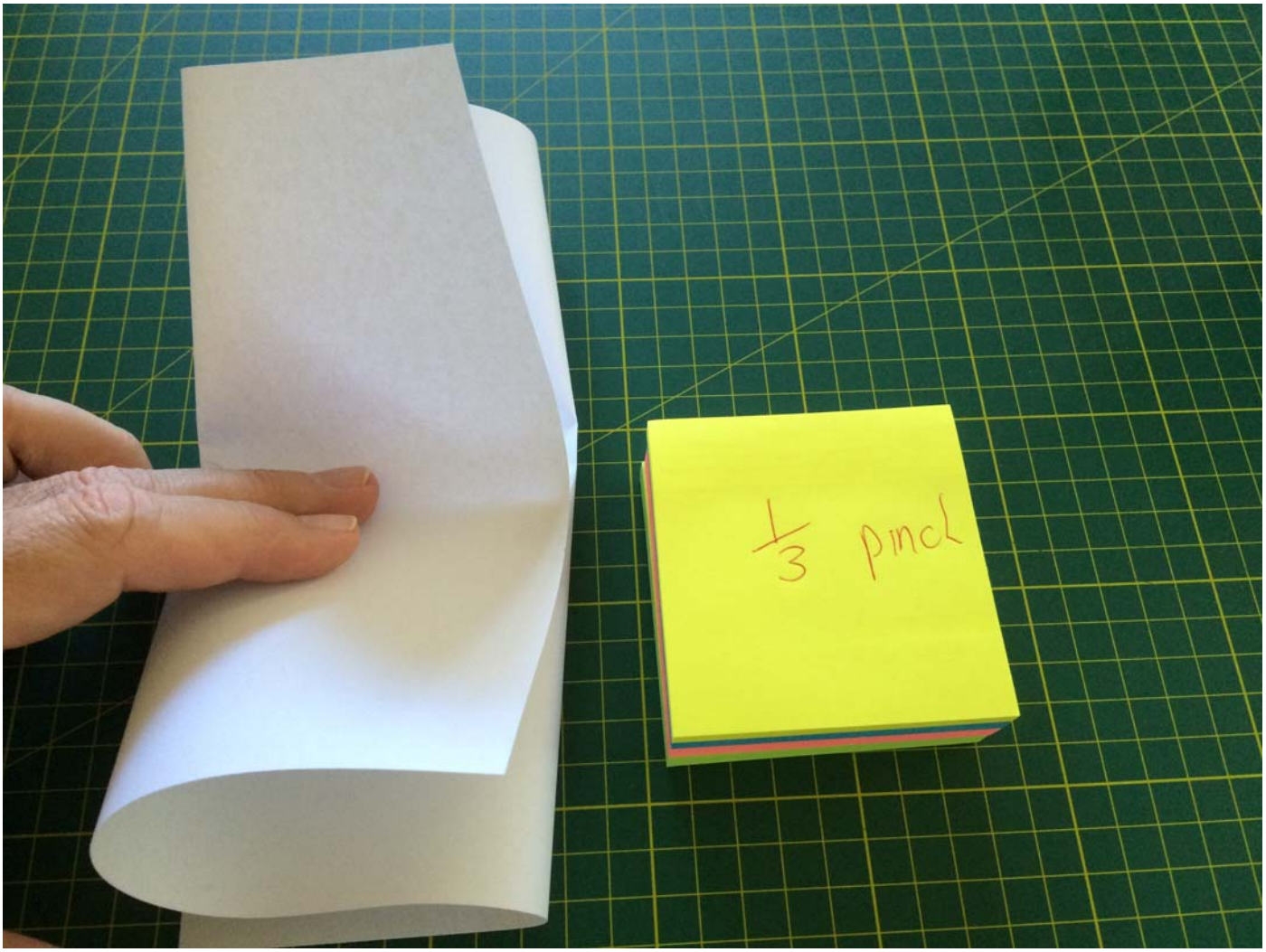
Beer Mug/Tankard/Teacup
designed by Peter Whitehouse

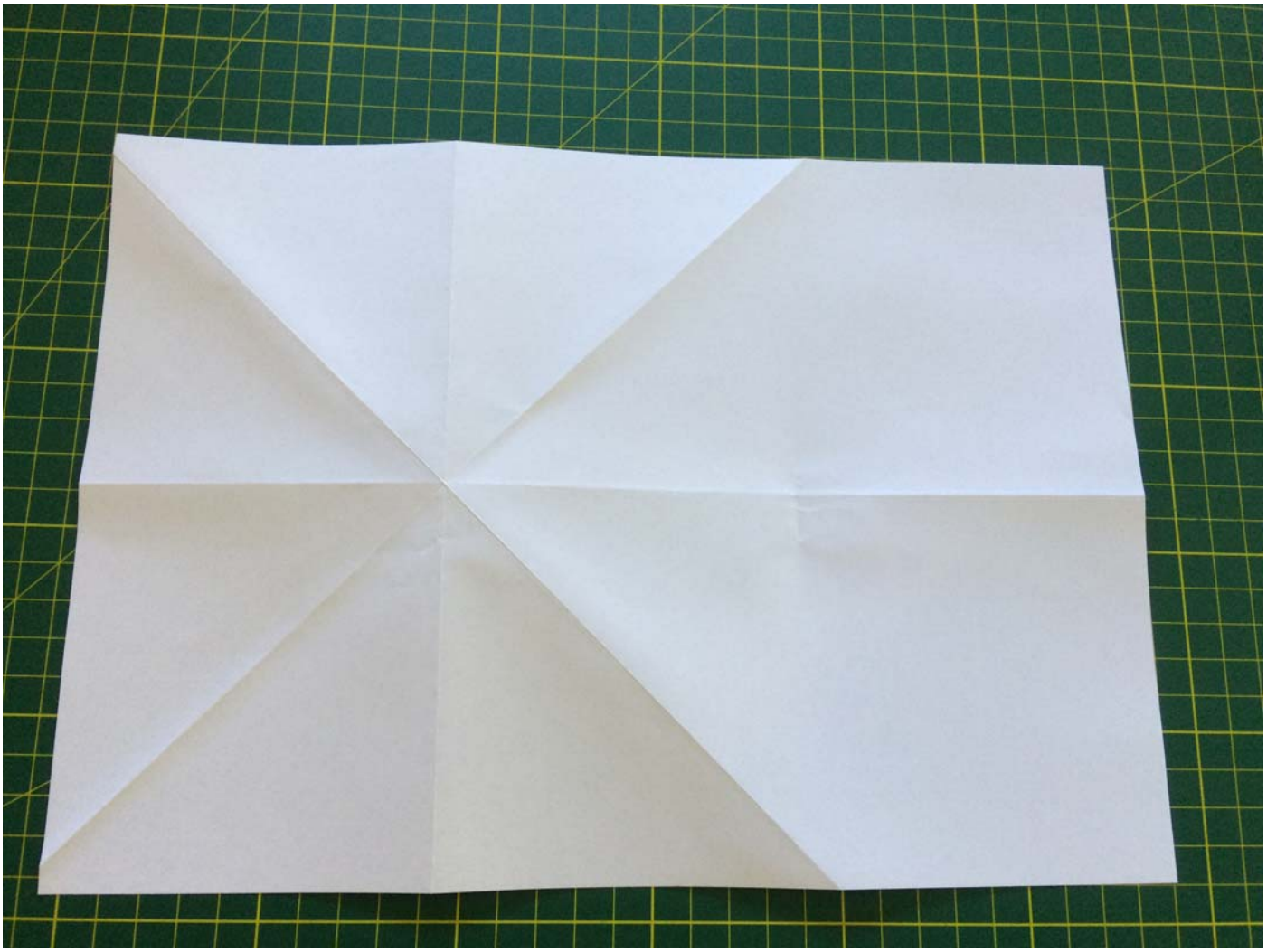


Start with Ax size sheet (or 2x1 if you need more for the handle)

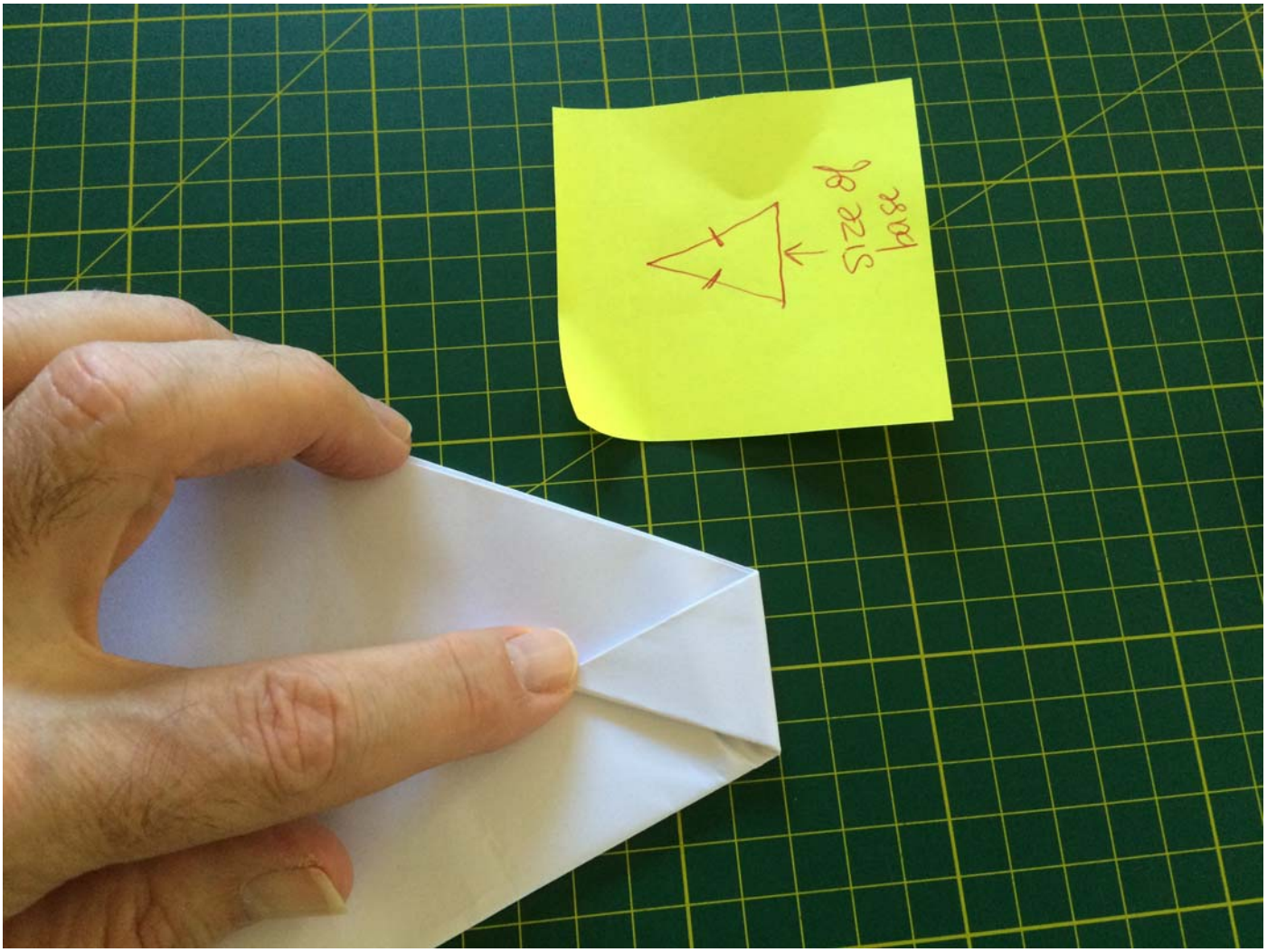


Pinch in 3rds, to find 1/3 – this can be approx., see I have “s”-shaped the paper to wiggle-adjust

Reinforce the 1/3 crease across the sheet – it is one of a number of construction axis needed to the coming octagon



Fold in half long ways – where the 1/3 and half intersect add diagonal lines at 45 degrees – line up on existing creases as you fold for a guide.

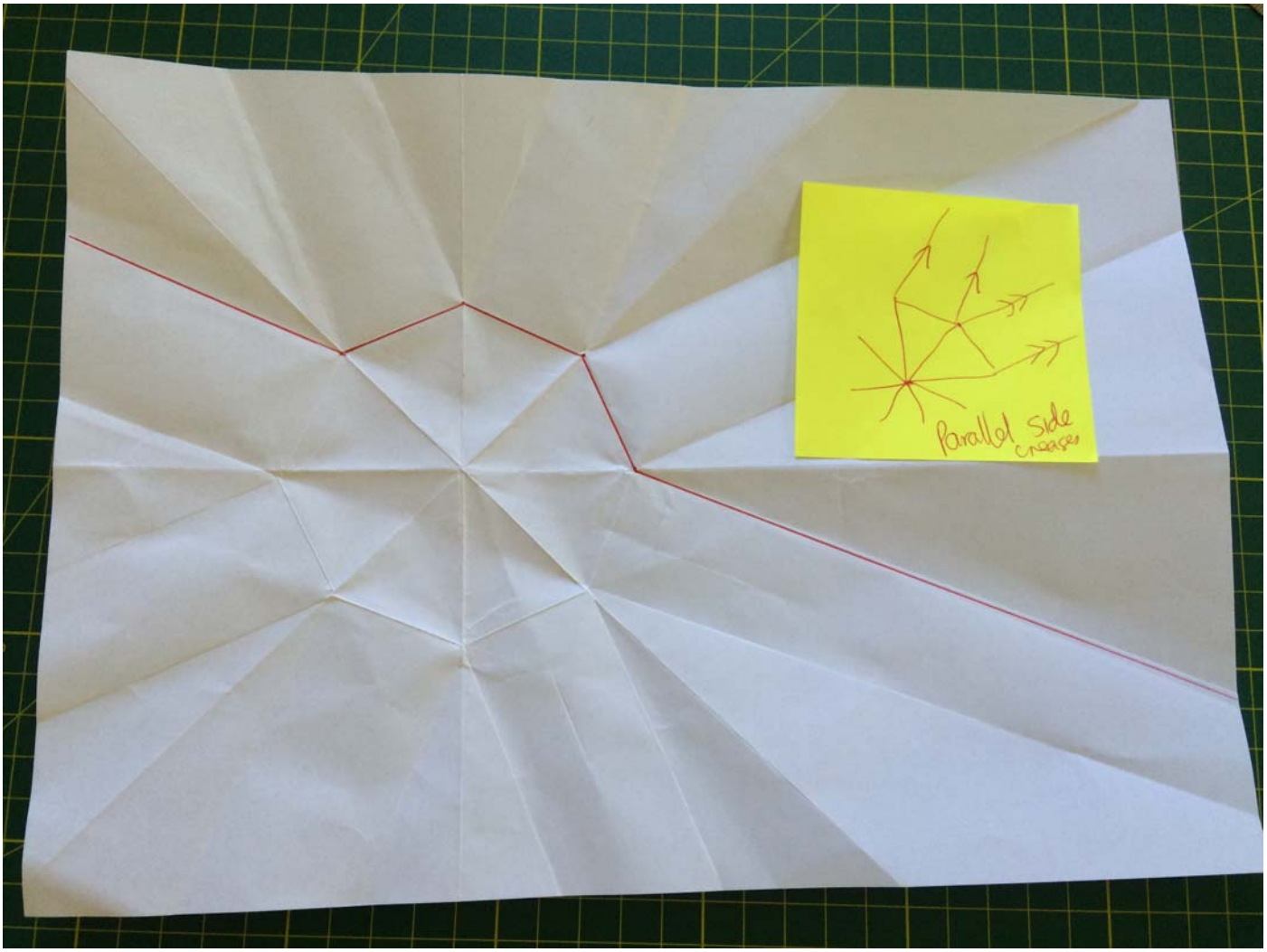


Now fold it up on all those lines to make a point, then fold a SMALL isosceles triangle (2 sides the same length, base will be the SIDE of the octagon to come.

In this model I made it HUGE – make it smaller else your cup's base is too big

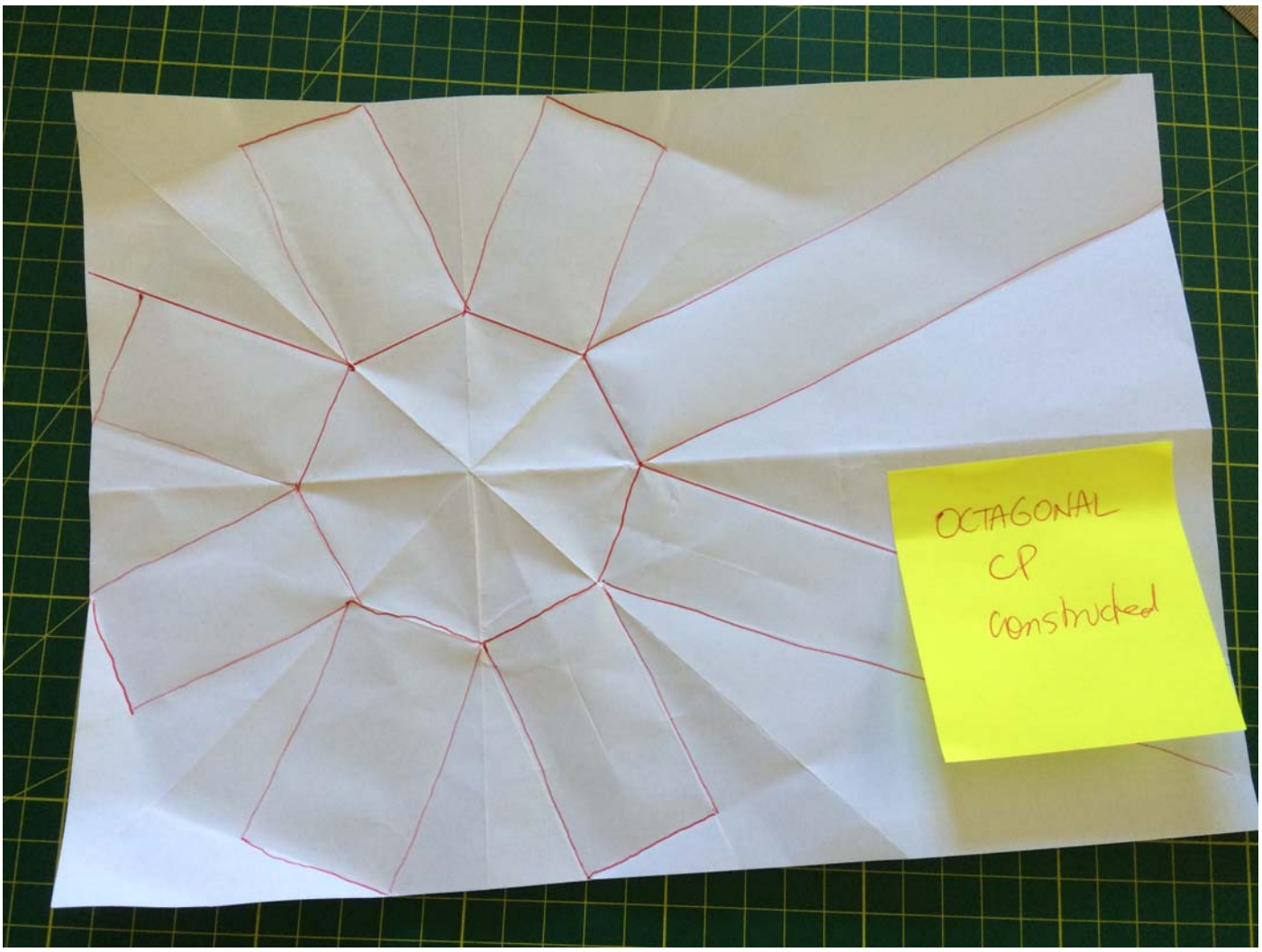
Unfold and you have made an octagon centred on the 1/3 middle reference point.

Tidy these creases up, reinforce the octagon.

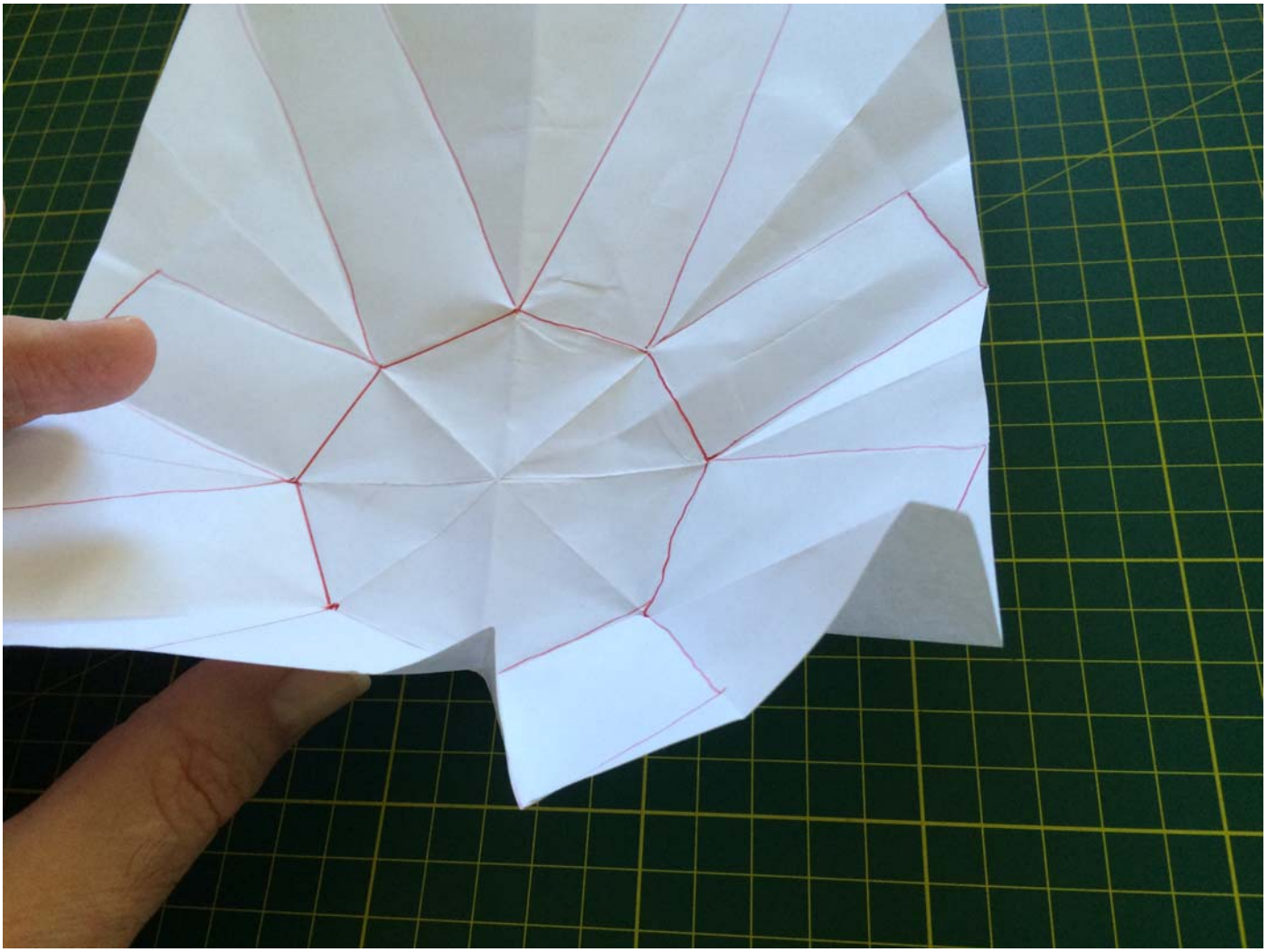


Now create PARALLEL folds from each vertex of the octagon – notice you can do this by folding lines connecting every 4th vertex – you do not need to fold through the base (it is already creased enough) – extend these folds to the edges of the sheet

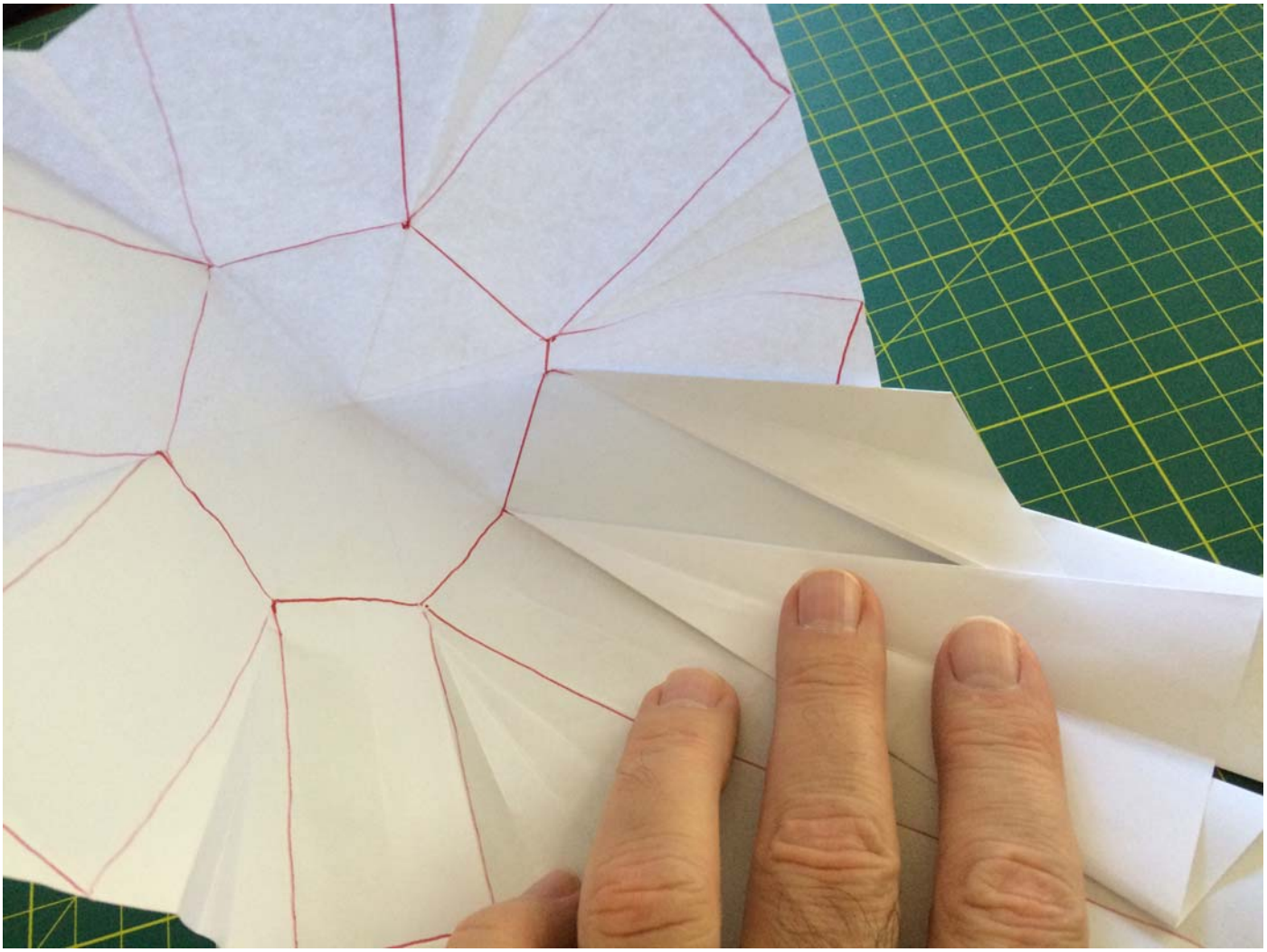
Construction method detail



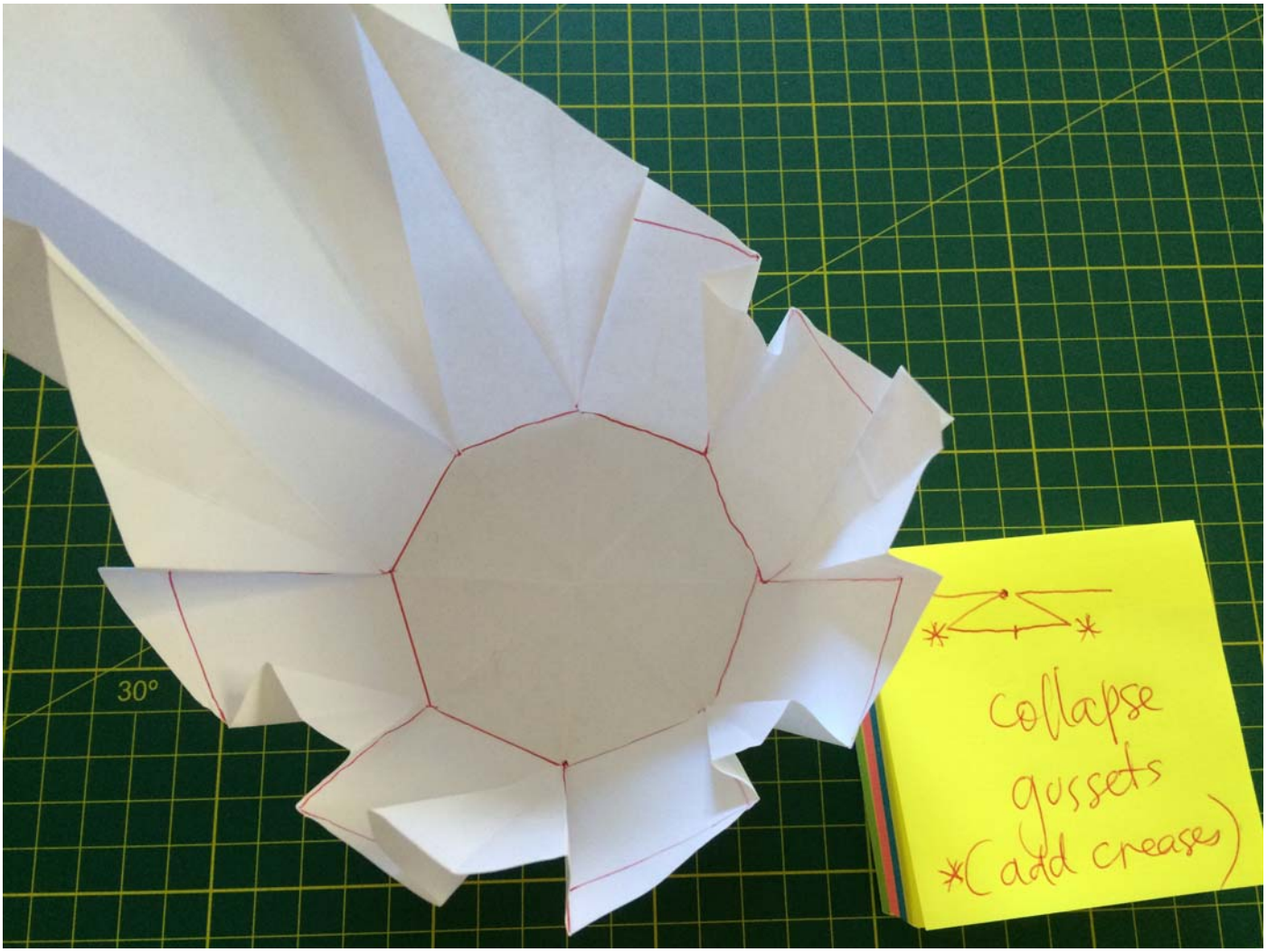
Largely complete crease pattern for the vessel. The height of the finished vessel is dependent on how far it is away from the sides of the sheet (I have sort of marked the max height in roughly here) – there will be a rolled edge, so the height will be a little less than the shortest sides (you can see the corners touching the sides already)



Each triangle between the sides will be a gusset – they require 2 extra folds to make a double zig-zag that will sit flat – see next picture

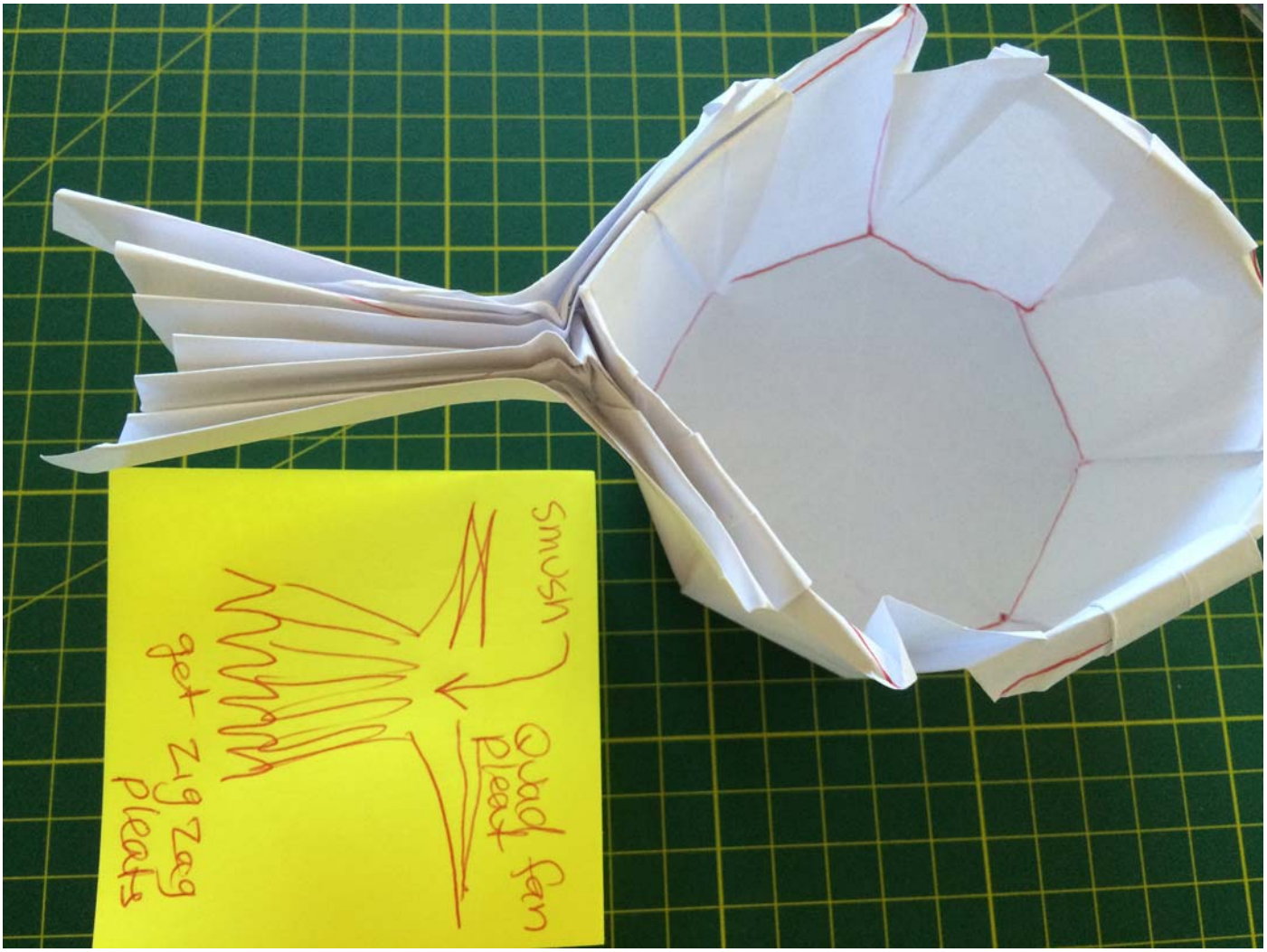


Gusset formation – notice each triangular gusset is actually folded into 4 – it is already in half, just half the halves and you have the creases for this. Take care, this is fiddly – neatness rewards



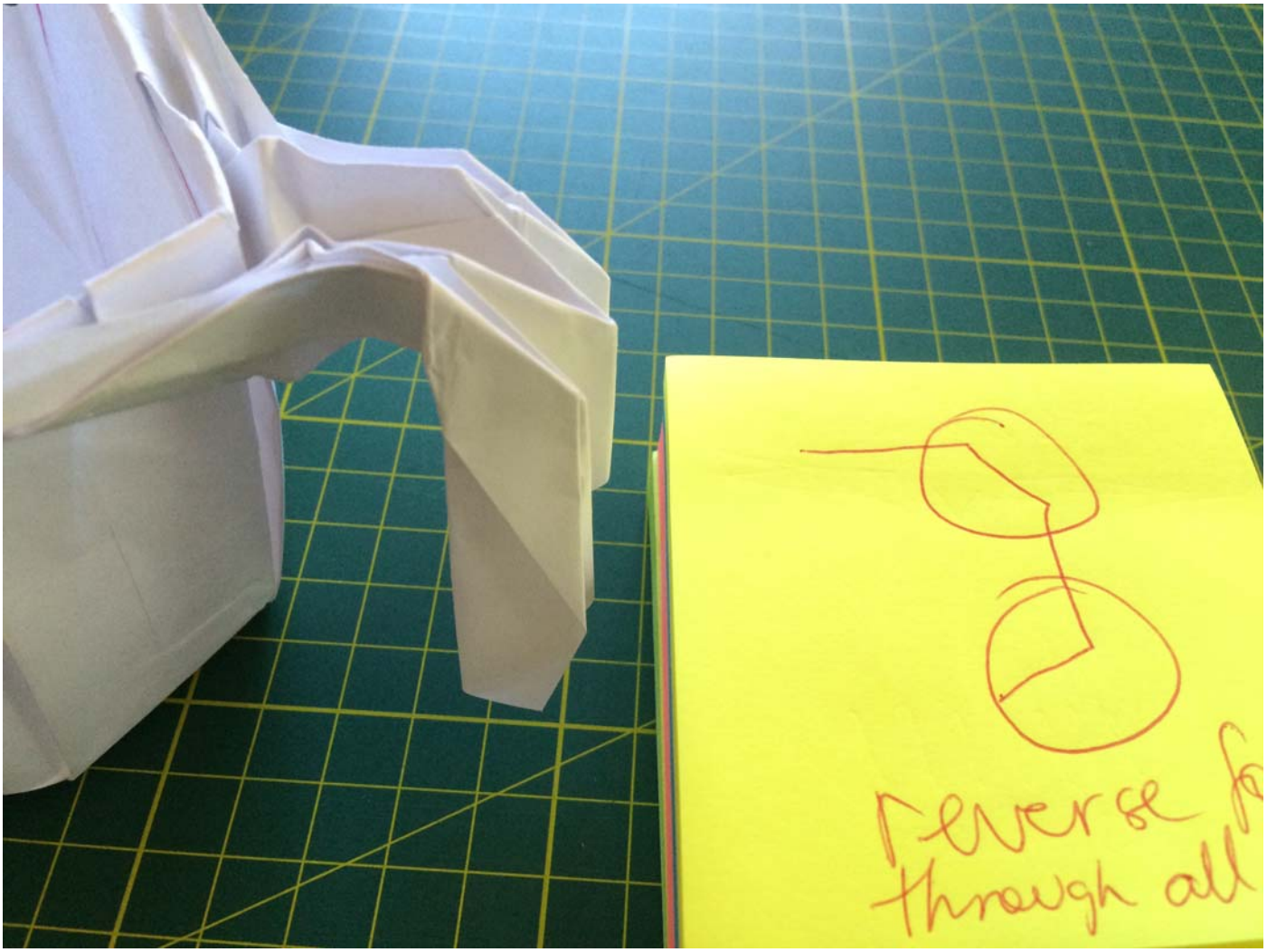
All gussets in place, we can now start finishing the vessel

Carefully, roll the edges over the gussets until it is stable and locked – start opposite where the handle will be, just bend over the large handle chunk as it requires special mangling



Beginning the handle formation – I 4x fan pleated each side of the handle (more if you can manage it) which results in a fan/zig zag pleat at the end of the handle bundle sticking perpendicular to the side of the vessel.

You can then roll/smush the lib of the vessel to tidy it some more and further lock wayward gussets



Next is a series of reverse folds through all zig zags to turn the handle from a stickey outey thing to a rounded thing

If you have been careful (and not made your base too big, the end tip of the handle actually tucks into the gusset pleat it is heading towards neatly (unlike the one above)

Conceptually, this is the form – I rushed it, sorry, but hope you get the idea