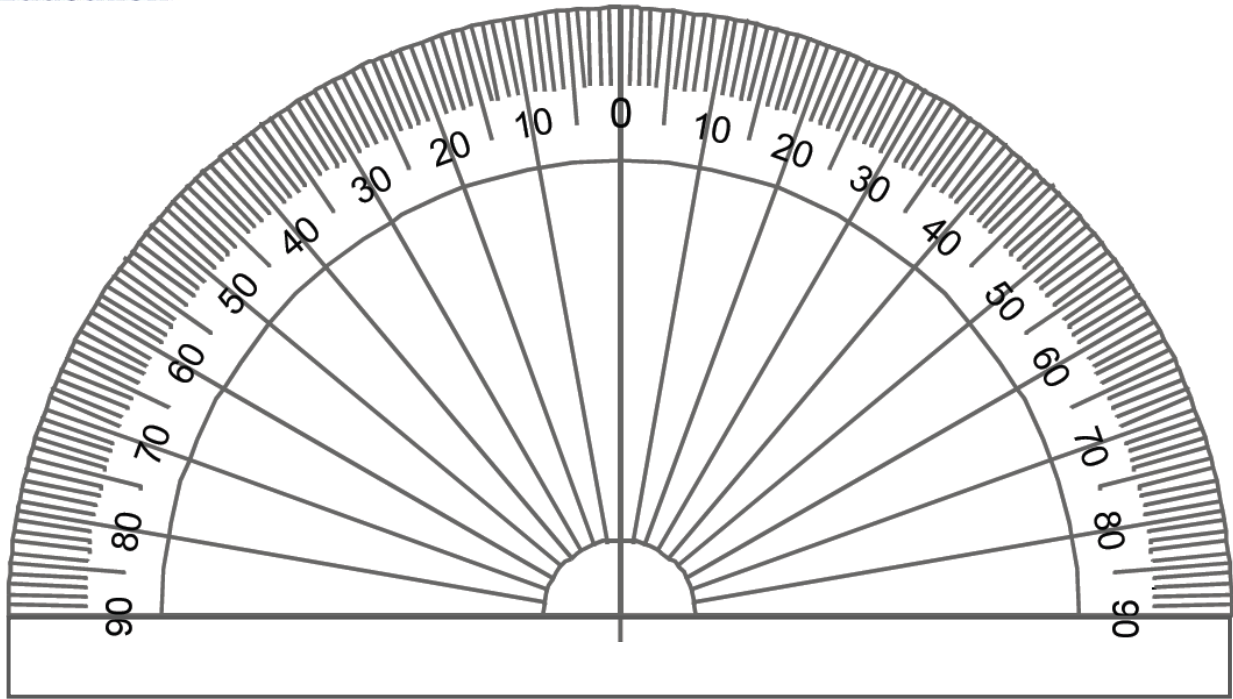


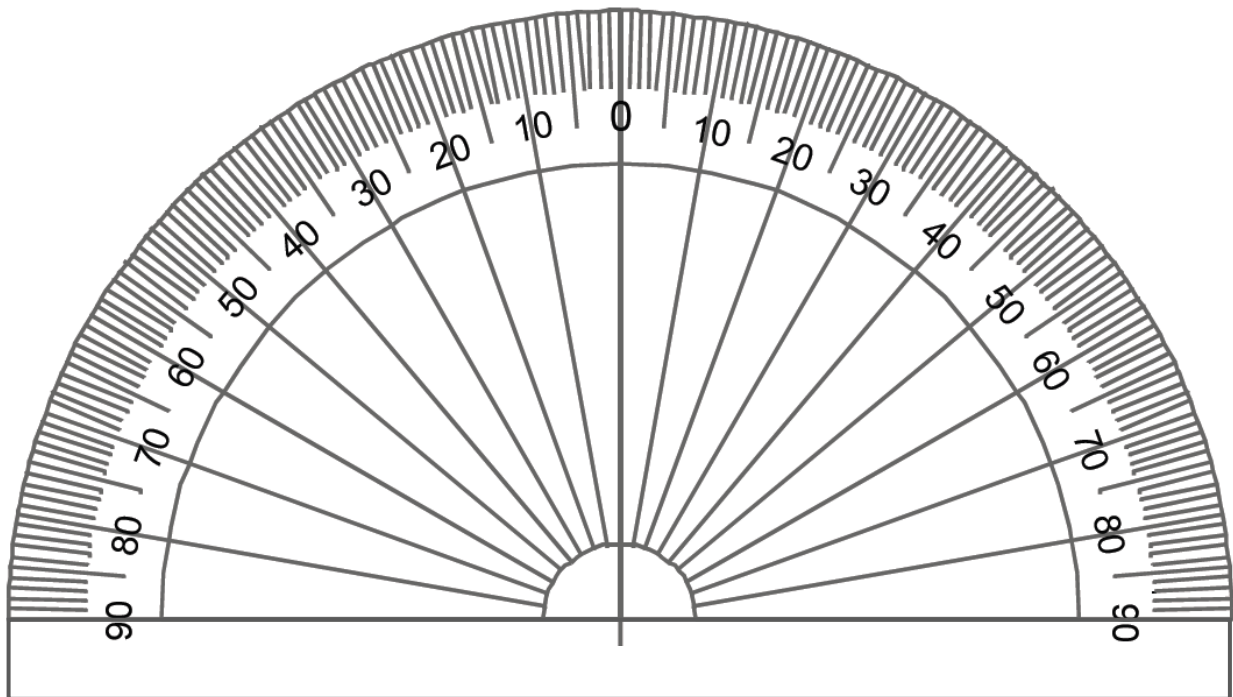
Conference 2013: Equipment to make and use in the maths classroom

This was a very practical session exploring a range of equipment that can be made by students. There were chosen because they can a) be made inexpensively and b) offer an insight in to the mathematics being studied. Here is a reminder of the tools we made, and were possible templates are included afterwards.

- Clinometer
- “Angle thingies” for topics such as angles, pie charts, proportion and mensuration of sectors.
- paper helicopters for data collecting (see also paper aeroplanes).
- Tiny whiteboards. The usual mini whiteboards cut in to four pieces for work on fractions, decimals, algebraic expressions, averages etc.
- “Digit flippers” see also the ones available at <http://www.cleavebooks.co.uk/trol/trolxj.pdf> as “Flippin’ Sums”. We discussed using these for arithmetic and averages.
- Stringy quadrilaterals.
- Paper protractor. <http://www.youtube.com/watch?v=zFNBEZ9-8t8>

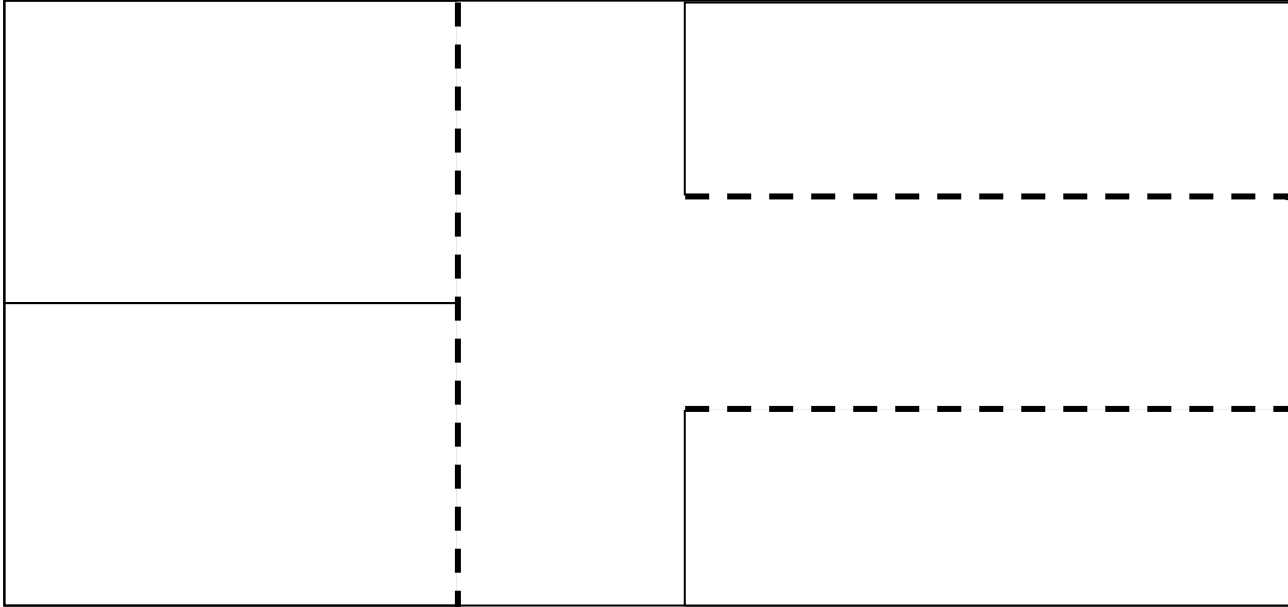


(Adapted from <http://www.subtangent.com/maths/resources/clinometer.pdf> which provides full written instructions for making a clinometer).

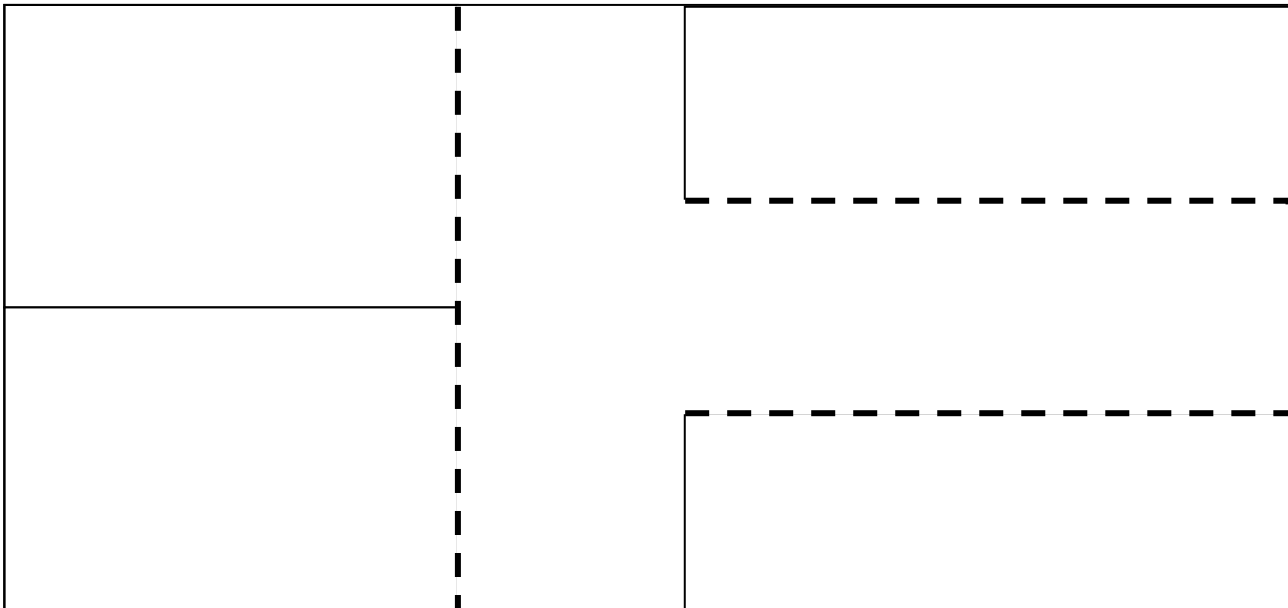


(Adapted from <http://www.subtangent.com/maths/resources/clinometer.pdf> which provides full written instructions for making a clinometer).

Cut along the solid lines and fold along the dashed lines.



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7	1	5	6
4			6
8			2
4	3	7	9

- 1) Fold the outside columns inwards (so that 7 touches 1 and 4 touches 3 on the left hand side and 6 touches 5 and 9 touches 7 on the right hand side). Unfold.
- 2) Similarly, fold the top row down and the bottom row up. Unfold.
- 3) Fold in half along the middle horizontal line away from you (so the back of 4 touches the back of 8). Unfold
- 4) Similarly, fold in half and away from you along the vertical middle line. Unfold.
- 5) Cut out the middle four blank squares so tha you have a square ring of numbers.
- 6) On the top row glue the middle two squares back-to-back (1 to the back of 5).
- 7) On the bottom row glue the middle two squares back-to-back (3 to the back of 7).
- 8) On the left hand column glue the middle two squares back-to-back (4 to the back of 8).
- 9) On the right hand side glue the middle two squares back to back (6 to the back of 2).

Further templates and alternative instructions can be found as “flippin’ sums” at <http://www.cleavebooks.co.uk/trol/trolxj.pdf>