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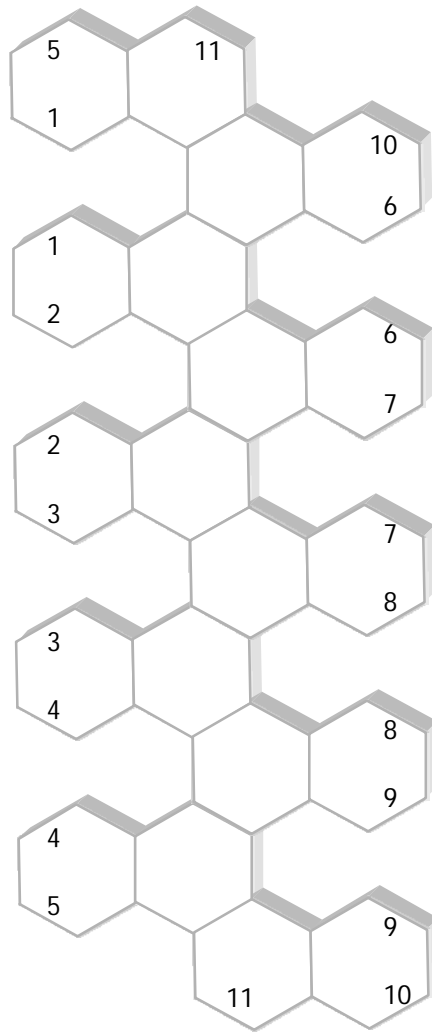
WE CAN START OFF WITH A PIECE OF GRAPHITE!

On the right side are arranged 20 hexagons in a staggered manner (page 8). Enlarge this by 141%; photocopy onto an A4 paper, paste on a file cover and clip out the design. Along the bonds, bend all the hexagons inwards. You will see that the open ended pentagonal courtyards will come together (page 9). Tape the edges, 1-1, 2-2,... 11-11 from underside. There, we have the bucky ball!

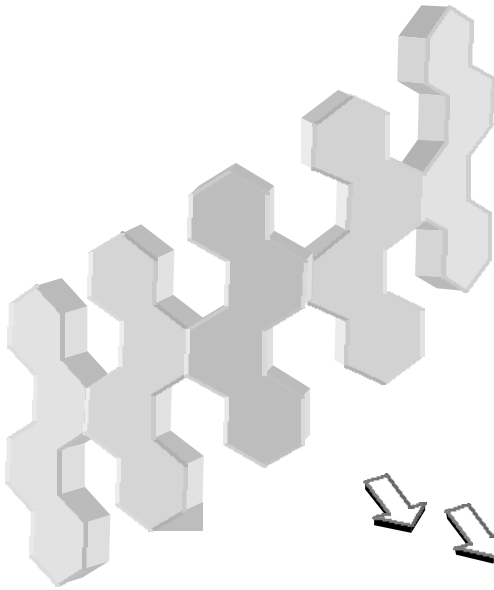
From bigger and bigger pieces we can make bigger and bigger buckys. Buy a football, measure the length of a hexagon side, make 20 hexagons using an instrument box. Proceed to make the football prototype.

If you are computer savvy, draw as big as a hexagon that you can, take a printout, paste it on a file cover, cut out the hexagon and use it as template to draw the 20 hexagons.

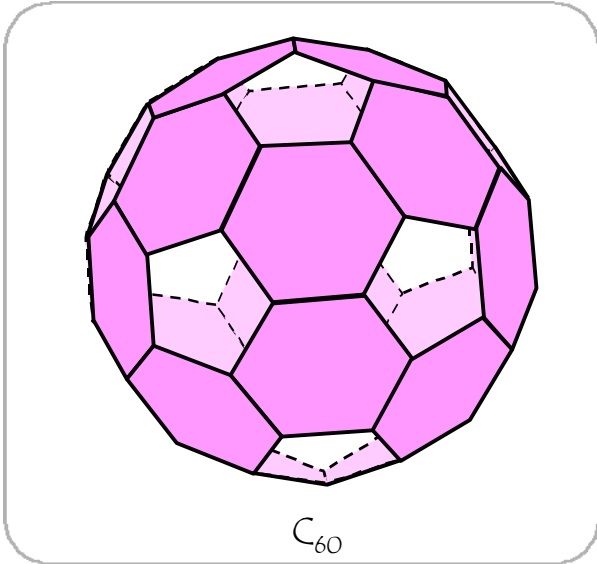
Buy a reasonably thick, but pliable sheet of aluminum, inscribe 20 hexagons using a hexagon template like one constructed as above, clip off the pentagon courtyards, and simply fold to get the bucky. No glue, no paste!



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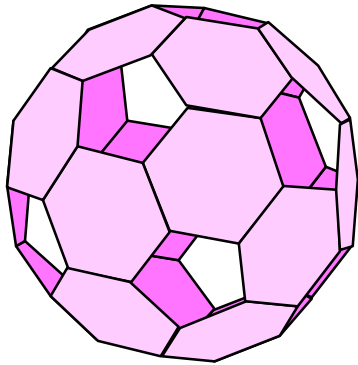
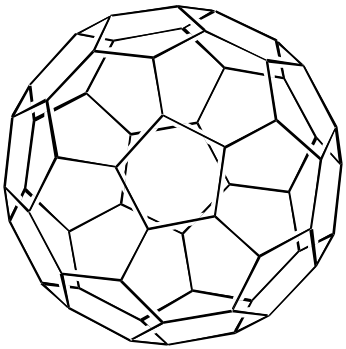


JOIN ENDS





TEN HEXAGON DUPLEXES (NAPHTHALENES)
FOR ONE BUCKY





TEN HEXAGON DUPLEXES (NAPHTHALENES) FOR ONE BUCKY

We can build the bucky with ten hexagon duplexes (HD, naphthalenes). Here, joining of equal halves that differ in their chirality (handed ness) will complete the ball! Two HD (naphthalene) models are shown on page 11 and 12. They can easily be made using a hexagon template on a thick sheet (file cover). You must note that the two edges are dissimilar, spatially; they are mirror images! So, as shown, if five each of these are assembled, by pasting the correct protruding edges to the underbelly of the another, half-buckys that differ in spatial disposition and which are mirror images will arise. Locking them together will give the bucky. Carefully fix by adhesive (fevicol) the protruding edges 1-10 to the underbelly of blank 1-10 (page 13).

The important thing to note here is that if you want to create a sphere from two half-ones, they must be spatially different or mirror images; but, the sphere that one gets has no such asymmetric label! It is just like making a meso compound loss of chirality by internal compensation, by joining two mirror images.

If you have now made the buckys by the above two methods, you will note that they are alike. They are truncated ones, where the open five membered rings are built around a six membered frame. We cannot do the other way easily, since the five membered rings in bucky are not contiguous.

