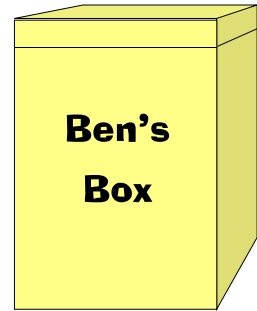


Application F:

Materials required: cm^2 paper, isometric paper

Design a Box

In this application you have to design a small box (rectangular prism) for presents. The dimensions of the box must meet a set of specifications.



Specification 1: The box is to have a volume of 80 cubic centimetres.

Task 1: What are the dimensions of the nine different sized boxes that could be made to meet this specification. (Use only whole number dimensions.)

Specification 2: No dimension of the box can be less than 2cm or greater than 10cm.

Task 2: Which three of the box sizes you have found in Task 1 meet this specification?

Task 3: Using the cm^2 paper draw nets for these boxes.

Task 4: What is the surface area of each of these three boxes (including a top).

Specification 3: The box is to use the least amount of cardboard possible to make.

Task 5: Find the dimensions of the box which fits all three specifications.

Task 6: Draw a model of this box on isometric paper.

Task 7: Cut out the net for this box and fold it up into its box shape.