MANUFACTO

PORTABLE DESK
WITH FRED

MATERIALS & TOOLS

NB this project involves some tools that can be dangerous and must be used under responsible adult supervision.

9 sheets of corrugated cardboard:

For a 13-inch PC:
- 5 sheets measuring 23 x 33 cm
- 4 sheets measuring 16 x 23 cm

For a tablet or games console:
- 5 sheets measuring 20 x 26 cm
- 4 sheets measuring 10 x 20 cm

Fabric, waxed cotton or leather:

For a 13-inch PC:
- 1 piece: 56 x 60 cm (for the structural fabric cross)
- 5 pieces: 30 x 40 cm + 4 pieces: 24 x 30 cm (for the sheathing)
- 2 pieces: 20 cm x 24 cm + 1 piece: 30 x 45 cm (for the pockets)

For a tablet or games console:
- 1 piece: 42 x 46 cm (for the structural fabric cross)
- 5 pieces: 28 x 34 cm + 4 pieces: 18 x 28 cm (for the sheathing)
- 2 pieces: 18 cm x 20 cm + 1 piece: 24 x 34 cm (for the pockets)

Tapes or fabric strips:

For a 13-inch PC:
- 2 lengths of fabric tape or fabric strips: 2 x 28 cm

For a tablet or games console:
- 2 length s of fabric tape or fabric strips: 2 x 20 cm

1 small button, c. Ø 6 mm in diameter

1 pencil or pen

1 felt-tipped or marker pen

1 ruler - 30 cm or 50 cm

1. pair of scissors or 1 cutter
*to be handled by an adult only

2. pins *
* to be handled by an adult only

Glue
(wood glue or strong liquid glue)

1 compass (or a small round object about Ø 4 cm in diameter (for the outline of the desk accessory)

1 small bowl or cup
(for the rounded corners of the cardboard template)

Thread

1. needle *
* to be handled by an adult only

2. large, heavy books (to use as a press)

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METHOD

1. DRAW AND CUT OUT THE CARDBOARD TEMPLATE

Draw the panels:

Use diagram N°1 (large or small version):

- Use the template to draw outlines of the nine panels on your cardboard sheets (8 flaps + 1 central panel).

- Use the upturned bowl to draw rounded corners at either end of one long side of the flap panels: 2 of the 4 left- and right-hand side flaps, and 2 of the 4 top and bottom flaps. (Refer to diagram no. 3)

- Using diagram N°3 or N°4 in the Annexes, mark the position of the handles on the 4 top and bottom panels. Make sure they are positioned symmetrically.

Cut out all the panels:

- Cut out each of the 9 panels (8 flaps + 1 central panel).

Cut out the rounded corners:

- Use scissors to cut out the rounded corners of the 8 flap panels.

TIP: The rounded corners are tricky to cut out. First make a dotted line (prick the cardboard with the tip of the cutter along each line, leaving a few millimetres between each prick, then cut out the rounded shape of the handle 'from dot to dot').

Cut out the handles for the top and bottom flaps:

- Use a cutter to cut out the handles along the lines.

Score the top and bottom panels:

- Using diagram N°3 or N°4 in the Annexes, mark the position of the handles on the 4 top and bottom panels. Make sure they are perfectly symmetrical.

- To score the cardboard, use a cutter to cut through one thickness only, between two corrugations. This allows the top and bottom panels to be folded along the scored line so that the handles meet vertically when the desk is closed.

- Score the top and bottom panels 5 cm below the top edge of the panel (1.5 cm below the handle).

IMPORTANT: The grooves in the top and bottom panels must be horizontal (along the length of the sheet of cardboard), so that they can be scored later, enabling the panel to be folded along the groove, below the handle.

- Fold the top and bottom flaps along the scored lines.

2. PERSONALISE AND CUT OUT THE FABRIC

Cut out the fabric 'cross' that joins the panels together:

Use diagrams N°3 and N°4:

TIPS: Follow the cutting Diagram for the fabric cross. The edges of the fabric cross will be 'sandwiched' and glued between the eight side flaps. The edges of the cross should therefore be slightly narrower than the width of the flap, so that the fabric will not show when the panels are stuck over it.

- Take the largest piece of fabric, for the structural fabric cross, and place the central panel in its centre.

- Use a felt-tipped or marker pen to draw small place markers at the 4 corners of the central section of fabric (NB leave a 2mm cutting margin so that the fabric can be cut out behind the place markers and hide them.)

- Draw lines from each of the 4 points, following diagram N°5 in the Annexes.

- Cut away the four corners of the piece of fabric, to leave the 'cross' as desired.

Cut out the fabric for the panels and flaps:

Use diagram N°2 :

TIPS: Use the visual for the object as your guide. Start by organising and arranging the panels on top of each other, in pairs. Place them like a mosaic on the fabric cross and around the central panel, in their finished positions. This will help you to visualise your personalised colour and Diagram choices. Depending on your choice of fabric, waxed cotton or leather, think about where to position each colour – inside or out – and about the colours of each of the three pockets.

Position the fabrics roughly over each panel, left, right, top and bottom, to quickly get an idea of how the object will look with your 'personalised' colour and Diagram choices. Find the combination you like best.

- Cut out 9 pieces of fabric, taking care to leave an additional margin of 3 or 4 cm around each cardboard panel (add about 8 centimetres to the length and width of each piece of fabric).

- Cut out 3 pieces of fabric for the pockets.

3. SHEATHE THE PANELS

TIPS :
- **Each of the 9 panels will be sheathed with fabric, waxed cotton, fine leather or decorative paper.**
- **Once you've decided on your personalised design and cut out the fabrics, place each piece of fabric in its proper place on the mosaic of panels. This makes it easier to see what you are doing and avoid mistakes when sheathing each panel.**
- **You can also make a sketch, and write your fabric choice on each component (eg. panel 1 = zebra fabric, panel 2 = polkadot fabric etc).**
- **Check that each sheathed panel corresponds to your personalised design and that the correct side of each panel is covered. They will be assembled in pairs, with the fabric-covered side outermost (front and back). If you make a mistake, you can still correct it by repositioning a panel that has not yet been covered.**

Sheathe one panel:

Using diagram N°6:

- Apply glue to the entire surface of the panel, then lay the fabric over it, perfectly straight, keeping a 3-cm or 4-cm margin around each side.

- Press firmly and smooth the surface of the glued fabric all over, to remove air bubbles or wrinkles.

- Turn the panel over and apply glue to the 3 or 4 cm fabric margin around each edge.

- Fold the fabric margin over on the long edges.

- For the rounded corners, use scissors to make incisions so that the fabric follows the shape without wrinkling or folding (see diagram N°6 in the Annexes).

- Repeat, to sheathe the 8 remaining panels.

4. MAKE THE EARPHONE STORAGE ACCESSORY (OPTIONAL)

- Draw a circle roughly Ø 4 cm in diameter on a piece of waxed cotton or leather.

- Cut it out using the cutter or scissors.

- Position it on one of the pockets (these will be stuck into place at the next stage) and hold it in place with a small dab of glue.

- Place the small button in the middle of the circle of leather or waxed cotton and sew it to the pocket. Begin by making the first stitch on the reverse of the pocket, then pass the needle through each hole in the button, going and back forth several times. Tie the two ends of thread together on the reverse of the pocket.

5. MAKE THE POCKETS

TIPS :
- **The flat patch side pockets are designed to hold pens, a phone and other items firmly in place, so that they don't slide about when the desk is closed.**
- **If you're using fabric (ie. a frayed rather than a clean-cut edge), make a fold along the upper edge, 1 or 2 cm from the edge, and secure the fold by pressing it with a hot iron (get a responsible adult to do this). Skilled stitchers can also sew a hem.**

Left and right patch pockets

Using diagram N°6:

- Take the pieces of fabric corresponding to the left- and right-hand pockets.

- Place one piece of fabric, perfectly straight, at the desired height, on the first panel (inside the desk).

- Pin the fabric with two needles on the front side of the sheathed panel, to ensure it stays in place when it's turned over.

- Turn the panel over to position the back pocket.

- Check again that the fabric is still in the right position, parallel with the edge of the panel.

- Cut 'darts' into the corners and rounded corners (as for the sheathing), so that they can be folded over without too many wrinkles (see diagram N°6).

- Apply glue to a depth of 3 or 4 cm around the edges of the panel.

- Fold over the fabric edges and press them down firmly.

- Repeat for the second pocket.

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The top pocket

Using diagram N°7:

- Take the fabric pieces corresponding to the left- and right-hand pockets.

- Position the piece of fabric perfectly straight, at the desired height (on the desk's inner panel)

- Pin the fabric with two needles on the front side of the sheathed panel, to ensure it stays in place when it is turned over.

- Turn the panel over to position the back pocket.

- Check again that the fabric is in place and parallel with the edge of the panel.

- Apply glue to a depth of 3 or 4 cm around the edges of the panel.

- Leave a margin of 1 cm along the right and left-hand sides of the pocket.

- Fold the left-hand and right-hand edges of the pocket over onto the panel.

- Fold the two bottom corners of the pocket fabric as if wrapping a parcel.

- Apply glue to a depth of 3 or 4 cm along the bottom edge of the panel.

- Fold over and flatten the fabric along the bottom edge of the pocket, leaving no margin this time.

TIP : The top pocket is deeper and bigger because it will hold large desk items like the mouse and charger. It needs to be 'puffed out' to create more space.

6. APPLY THE TAPES OR FABRIC TIES USED TO CLOSE THE DESK

- Measure the centre of each panel (left and right) and use a needle to mark the spot for glueing.

- Position the tape (or leather strap) perpendicular to the central pin marker, so that its decorative side will be visible when the left and right panels are closed.

- Glue the tape or leather strap to half the depth of the panel.

- Do the same for the second tape/strap.

- If necessary, trim one of the tapes or straps to ensure that both are the same length.

7. ASSEMBLE THE PANELS

Central panel

- Glue the central panel in the middle of the fabric cross.

- Press the panel and fabric together long enough for the glue to dry, using two large, heavy books.

Assemble one side (2 flap panels 'back to back')

TIP: Adjust the margins left between the central panel and side flaps, depending on the desired depth and the number of items your desk will hold: leave a margin of 5 cm for a 13-inch PC and 3 cm for a tablet.

- Push up the fabric at the place where the two flaps will be 'sandwiched' together, so as to position the first bottom flap panel, sheathed side downwards.

- Carefully position the bottom flap facing and parallel to the central panel.

- Be sure to leave a margin of 5 cm (or 3 cm) between the flap to be stuck, and the central panel, by measuring left and right with your ruler.

- Once the flap is positioned, apply glue all over its surface.

- Check again that the flap is parallel with the central panel, and 5 cm (or 3cm) away from it.

- Fold the fabric of the cross over onto the flap and stick it firmly all over.

- Reapply glue to the surface of the stuck fabric.

- Apply glue to the second flap panel (the 'mirror' of the first).

- Position the second glued panel exactly over the bottom panel, perfectly aligned, sheathed side up.

- Press firmly around all the edges of the panels so that they stick together perfectly, then press them under two heavy books to allow the glue to 'take'.

Assemble the other 3 sides (6 panels placed 'back to back', in pairs)

- Repeat the operation for the 3 other sides, with the 6 remaining panels.

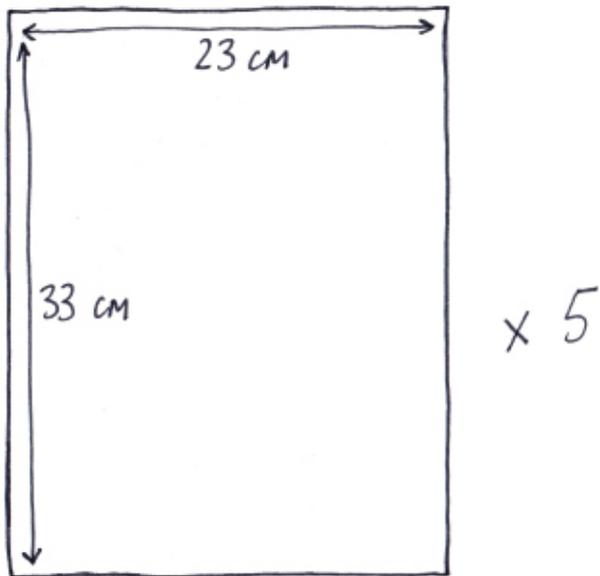- Keep everything firmly pressed for several hours, closing the 4 flaps over the central panel.
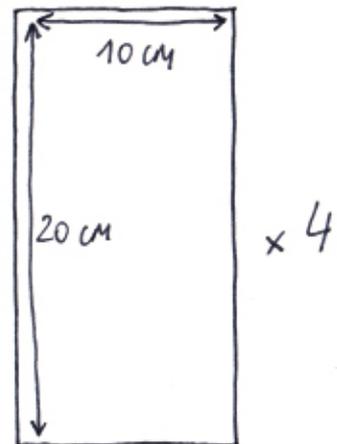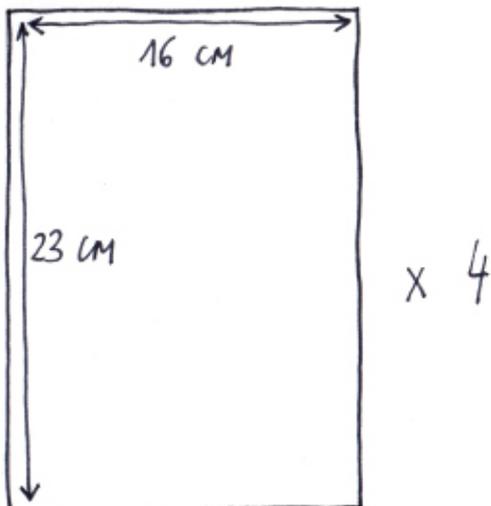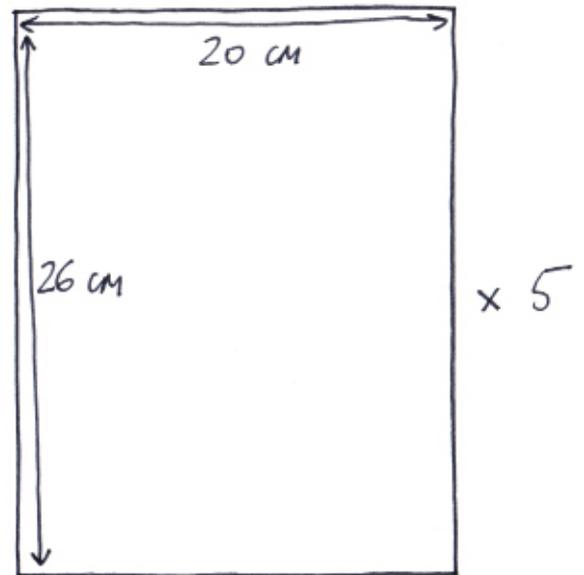
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ANNEXES

Schéma N°1

CARDBOARD TEMPLATE
(LARGE MODEL)

23 CM

33 CM

x 5

CARDBOARD TEMPLATE
(SMALL MODEL)

20 CM

26 CM

x 5

16 CM

23 CM

x 4

10 CM

20 CM

x 4

ANNEXES

Schéma N°2

FABRIC TEMPLATE (LARGE MODEL)

60 CM
56 CM
× 1

FOR THE FABRIC CROSS

40 CM
30 CM
× 5

30 CM
24 CM
× 5

FOR THE SHEATING

45 CM
30 CM
×1

TOP POCKET

24 CM
20 CM
× 2

LEFT & RIGHT
POCKET
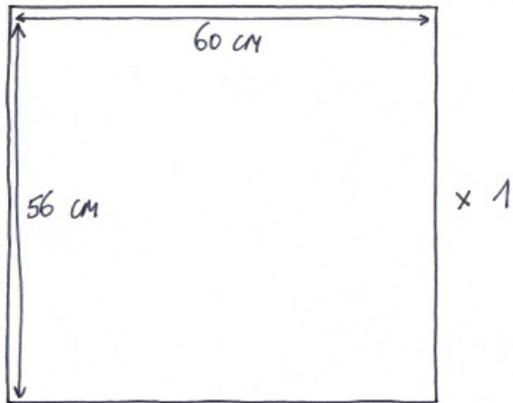
FABRIC TEMPLATE (SMALL MODEL)

46 CM
42 CM
× 1

FOR THE FABRIC CROSS

34 CM
28 CM
× 5

28 CM
18 CM
× 5

FOR THE SHEATING

34 CM
24 CM
×1

TOP POCKET

20 CM
18 CM
× 2

LEFT & RIGHT
POCKET
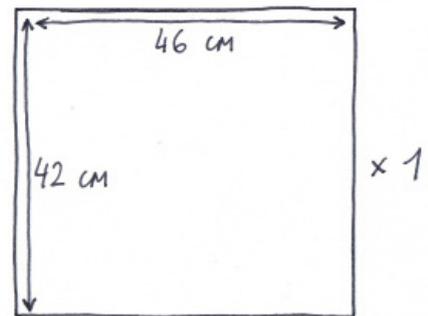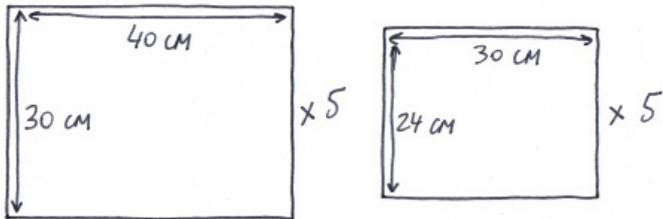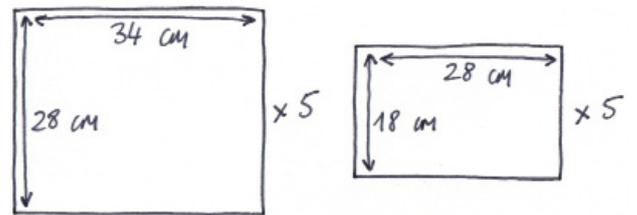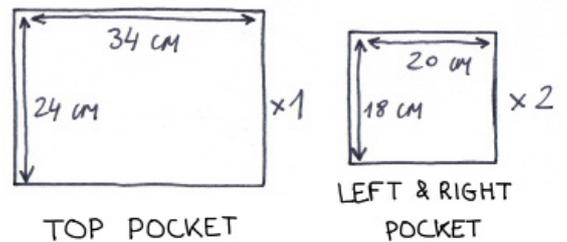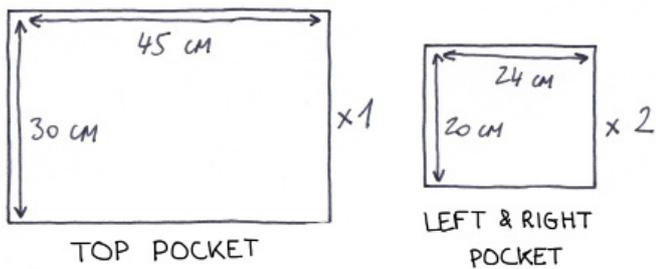
Schéma N°3

LAYOUT (LARGE MODEL)

TOP PANEL x2
23
33
5 cm
ø 8 cm

5 cm

16
x 2
LEFT PANEL
23
5 cm
CENTRE PANEL
33
23
5 cm
x 2
RIGHT PANEL
23
16
ø8 a

5 cm

FABRIC CROSS

33
BOTTOM PANEL x 2
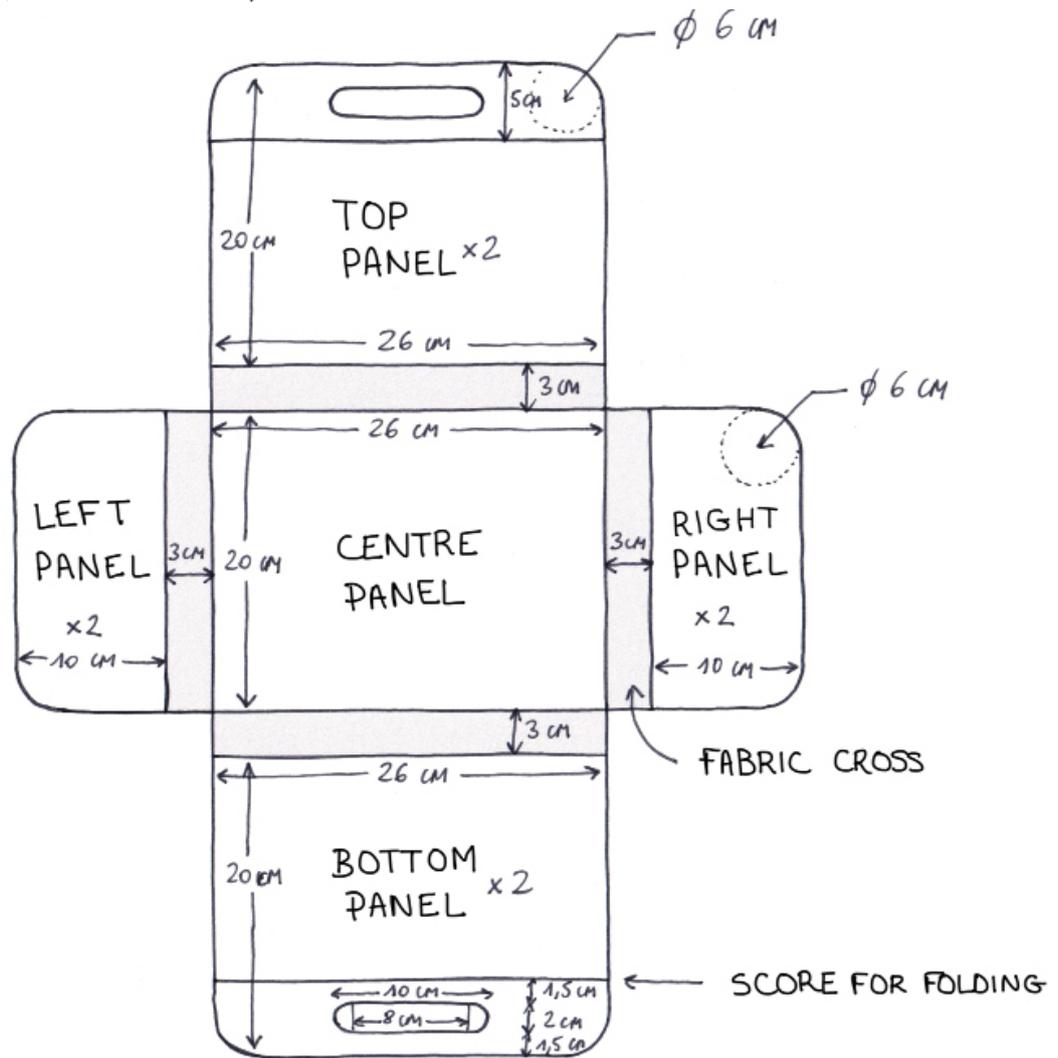23

SCORE FOR FOLDING
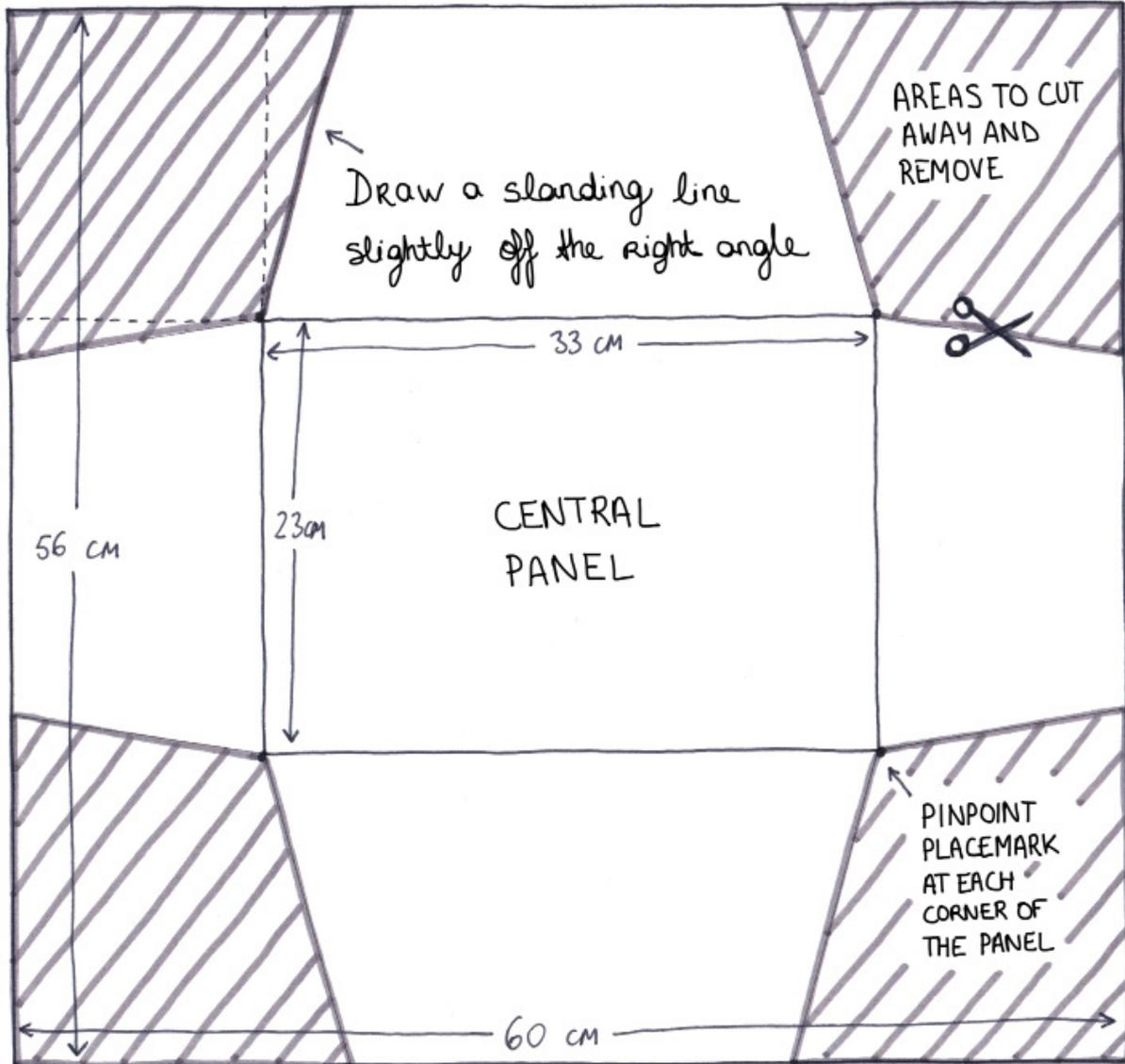
10 cm
8 cm
1,5 cm
2 cm
1,5 cm
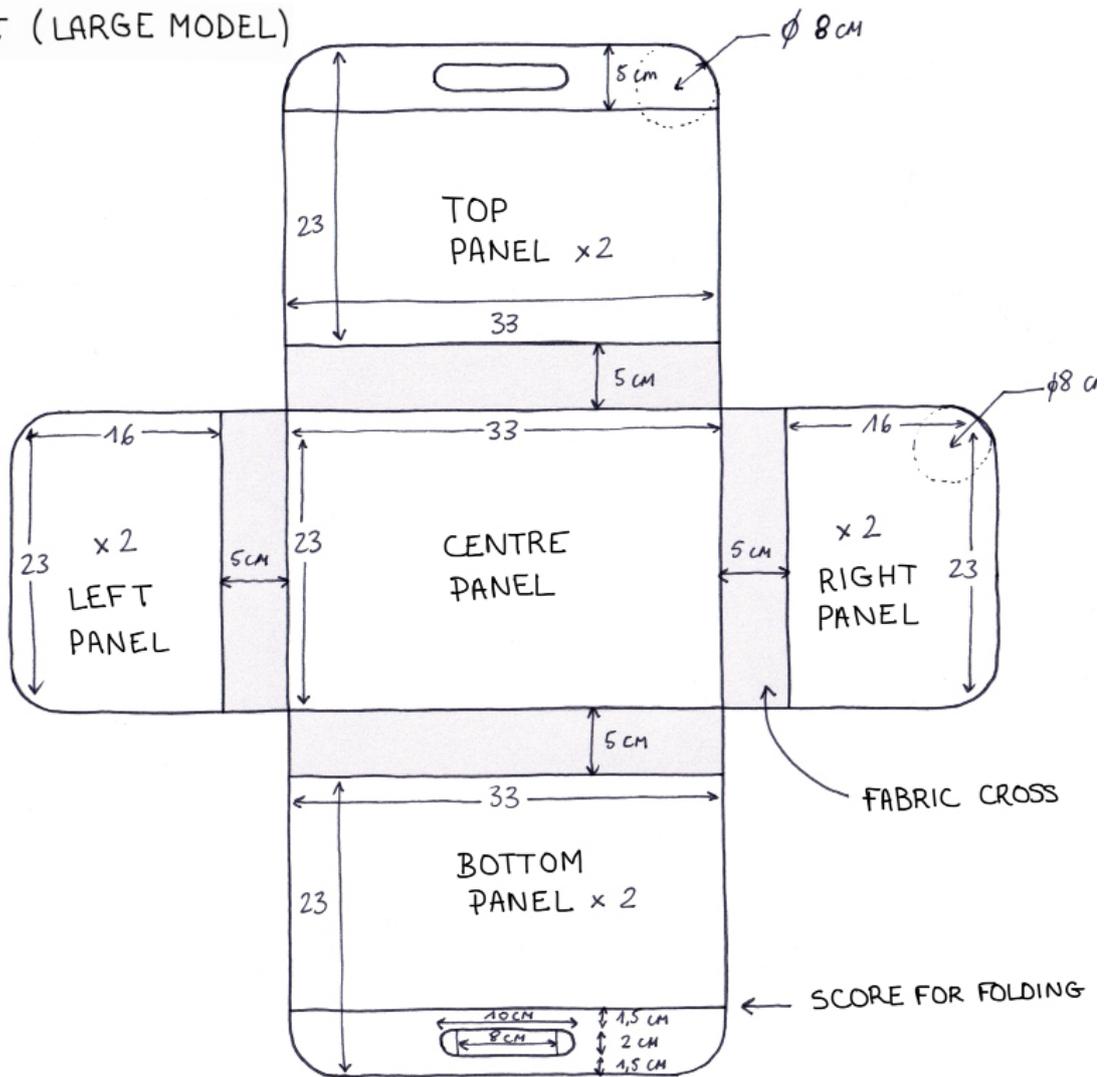
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ANNEXES

Schéma N°4

LAYOUT (SMALL MODEL)

ANNEXES

Schéma N°5

FABRIC CROSS

AREAS TO CUT
AWAY AND
REMOVE

Draw a slanting line
slightly off the right angle

33 CM

56 CM

23CM

CENTRAL
PANEL

60 CM

PINPOINT
PLACEMARK
AT EACH
CORNER OF
THE PANEL

ANNEXES

Schéma N°6

CUT ALONG THE LINES /

STOP 2MM FROM THE EDGE

FABRIC

4 CM

CARDBOARD
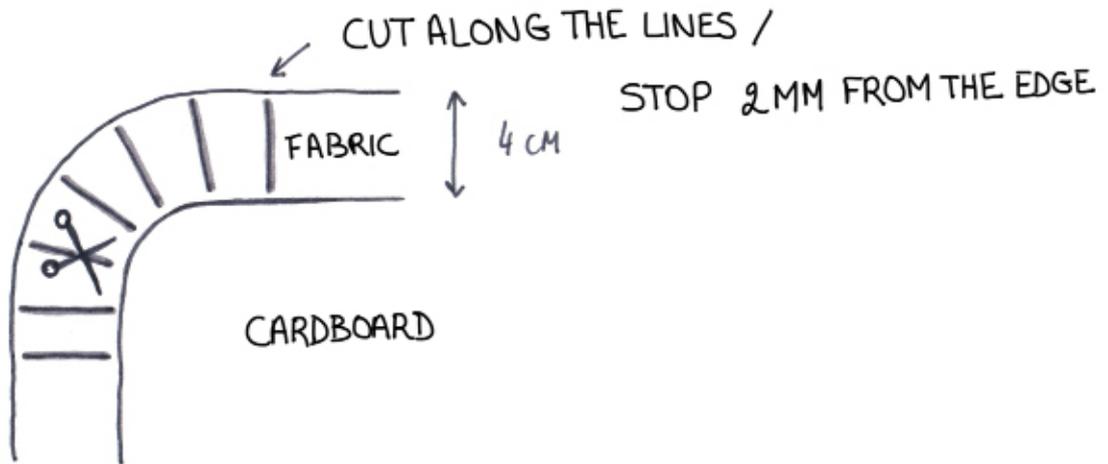
SCORED LINES FOR ROUNDED EDGE

CUT AWAY AND REMOVE

FABRIC

4 CM

CARDBOARD
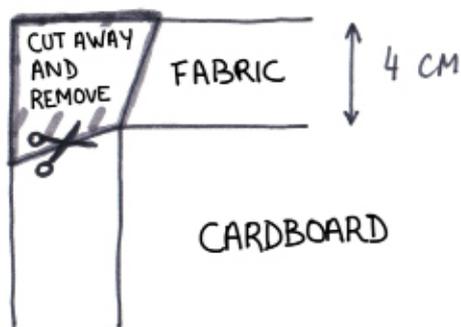
SCORED LINES FOR A CORNER 'DART'

CUT ALONG THE LINES /

STOP 2MM FROM THE EDGE

SCORDED LINES FOR THE HANDLE

ANNEXES

Schéma N°7

② FOLD THE CORNER AS IF WRAPPING A PARCEL, AND STICK DOWN

③ FOLD DOWN THIS FLAP

① SECTION TO FOLD DOWN

LEAVE A MARGIN OF 1CM

SHEATHED CARDBOARD

LEAVE A MARGIN OF 1CM

① SECTION TO FOLD DOWN

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