# XOR - Logic Goat

You will need a craft knife or other sharp knife, a pair of scissors, some glue and a glue spreader.

The best type of glue to use is white school glue (PVA.)

Print out the parts sheets onto thin cardboard. Photocopier card is ideal. Notice that the parts pages are marked front and back. Print out a front page, flip it over, then print the back onto the same sheet. Leave the ink to dry completely before continuing.

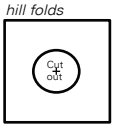
You'll also need to print out parts page three onto paper as the tongue needs to be flexible.

Before cutting anything out, score along all the dotted lines and cut out any holes with a craft knife. Both these jobs are easier to do on full sheets of card.

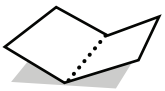
Dashed lines are hill folds, dotted lines are valley folds. Cut along the solid lines. Grey areas show where to glue



*Dashed lines are hill folds*




*Black or White lines show where to cut.*



*Dotted lines are valley folds*

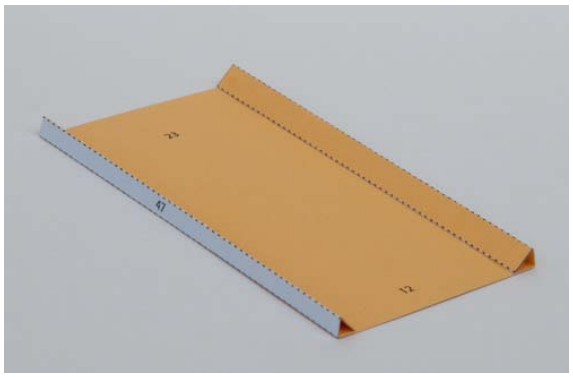


*Shaded areas show where to glue.*




Rob Ives www.robives.com

## 1



Fold round the edges of the base and glue them into place to make triangular tube section. (1)

Assemble the two pivots as shown below. (2)



Glue on the two hinges. (3)

## 2



Assemble the two buttons. (4-5)

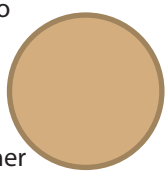
Glue the hinges into place in the corner of the button. (6)



## 3



For each button, wrap two coins this size in the coin holder. (7) Glue them into place. (8)



Assemble the push rods and glue them into place. (9-10)

Fold round and glue the base stiffener (11) then glue it into place. (12)




## 4




Glue the two buttons into place (13) making sure that they are parallel to the base.

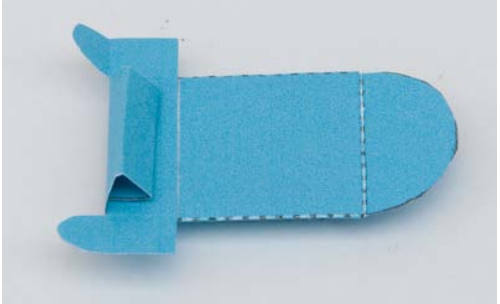
Assemble the rocker and rocker base as shown below. (14-16) Make sure that the long side of the rocker goes across the centre of the circle.




## 5




Glue together the Linkage Plate and the linkage as shown in these two pictures. (17-19)

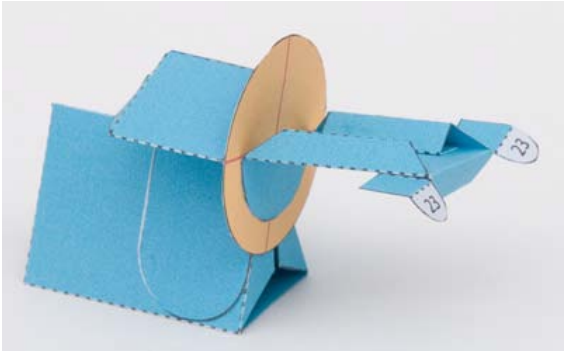


## 6



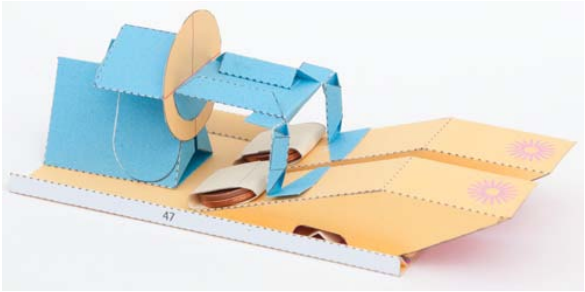

Glue the linkage plate to the rocker. (20)

## 7

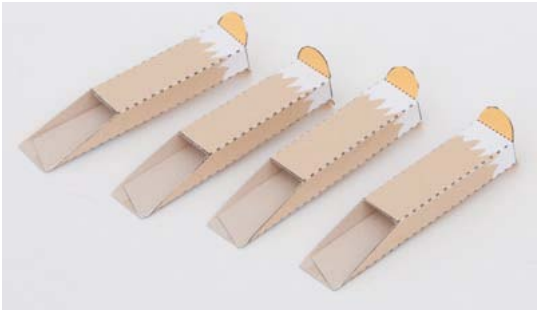


Glue the rocker to the rocker stand using the long tab on the hinge. (22)

Glue the whole assemble to the base. (23) Centre it and line it up with the back of the base.



## 8



Glue together the four legs. (24)

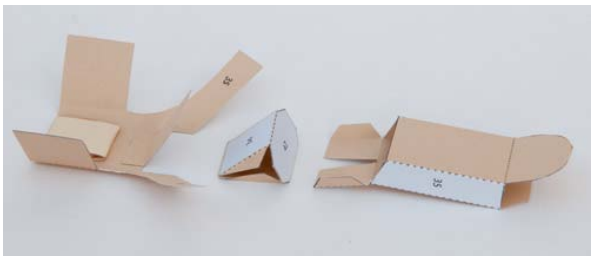
Assemble the two body inners. (25)

Glue them into the body carefully lining up the edges. (26)

Glue the legs to the body inners. (27)



## 9

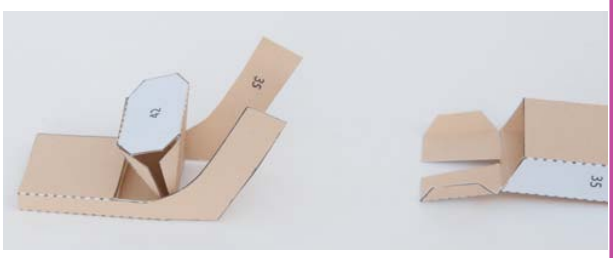


Glue together the neck-upper and head pivot. (28-29) Wrap the coin holder round the final coin (30)

Glue the hinge to the neck-lower (31) lining up the creases on both parts.

Glue the coin in place in the neck-lower. (32)

Glue the neck-lower closed (33) and glue on the pivot (34)

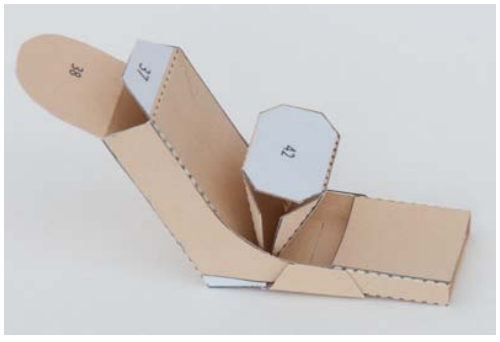


## 10



Glue the neck-upper to the two long tabs on the neck-lower. (35)

Use the pictures to help.



## 11



Assemble the head, eyes, horns and ears.

Glue the head into place on the end of the neck-upper. (36-41)

## 12



Glue the pivot to the inside of the body. (42)

## 13



Assemble the two push rods. (43)

## 14



Glue the two push rods to the linkages so that they spread apart as shown in the picture. (44)

## 15




Thread the push rods through the hole in the top of the box. Glue the feet to the box top. (45)

Glue the flap on the front of the box into place. (46)

## 16



Glue the ends of the two push rods into place on the underside of the rocker. This bit is tricky! (47) Make sure the glue is completely dry before you carry on.

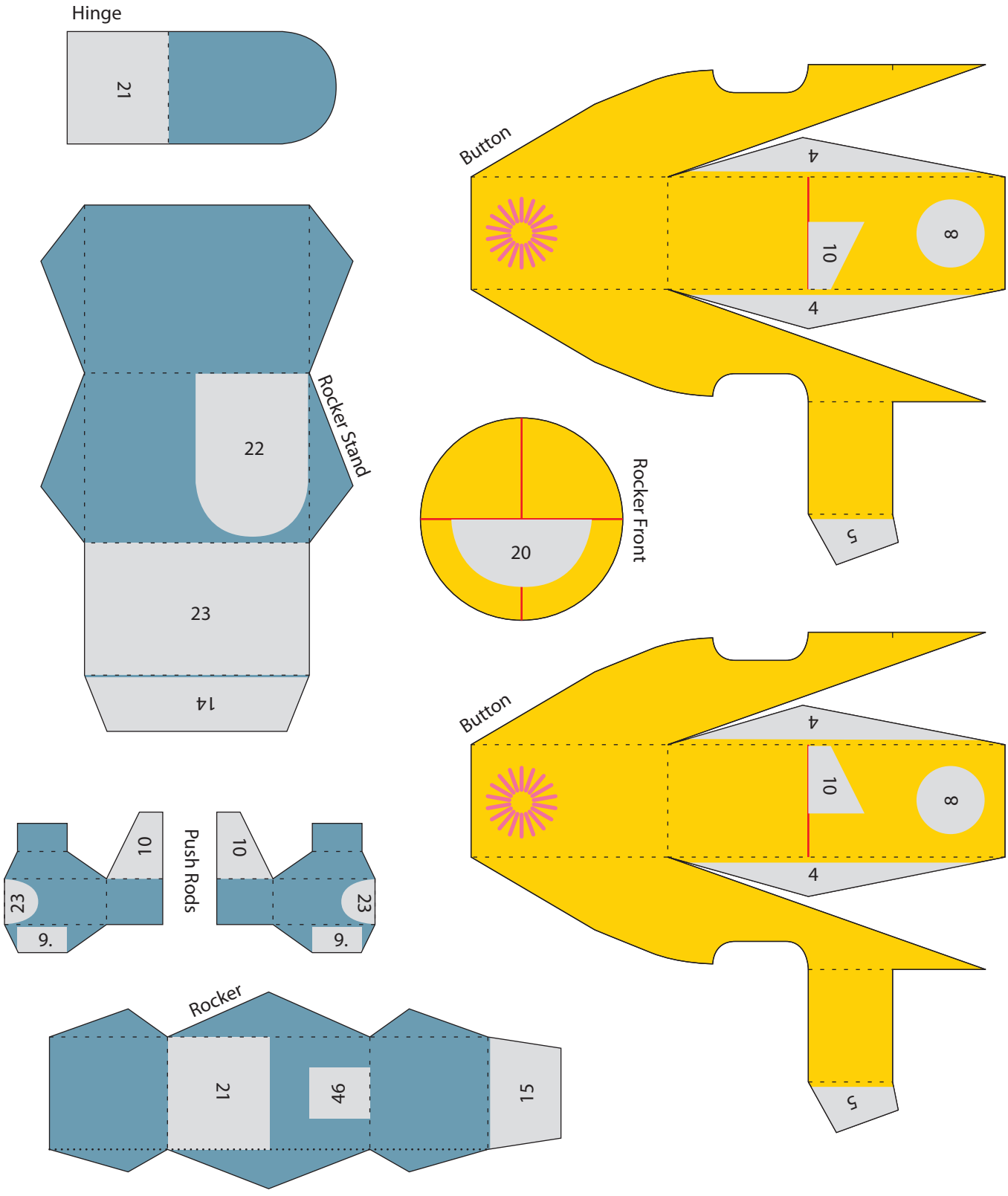
Close the box completely. (48)

Once the glue is dry your xor-goat is complete.

Logic gates are at the heart of all modern computers. The xor logic goat is the exclusive-or gate in paper goat form.

The goat nods her head if one button OR the other button is pressed but not if both or neither are pressed.






xor logic goat : Parts front 1

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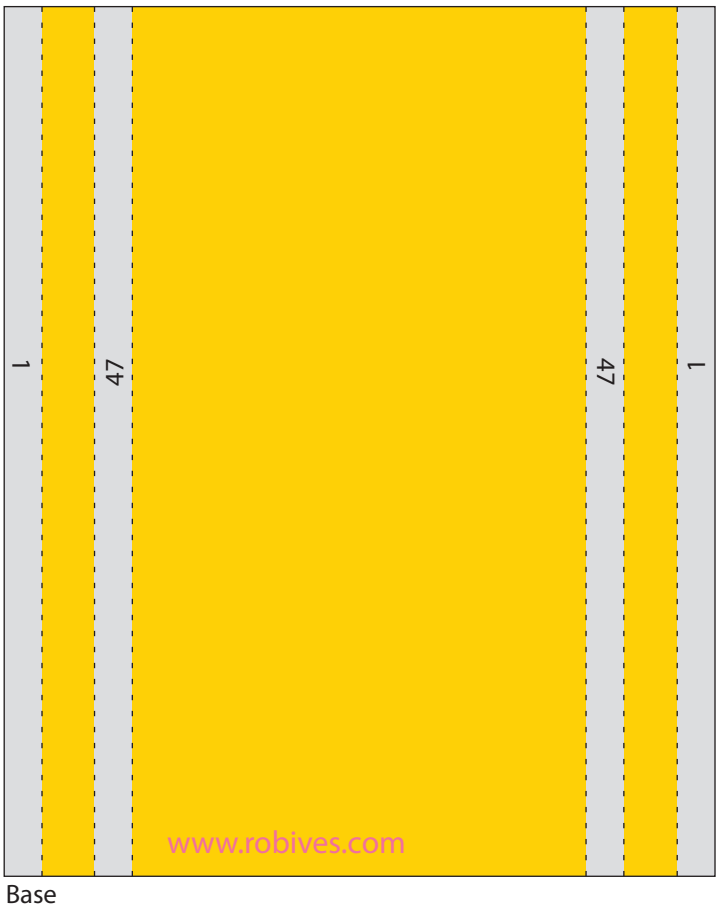
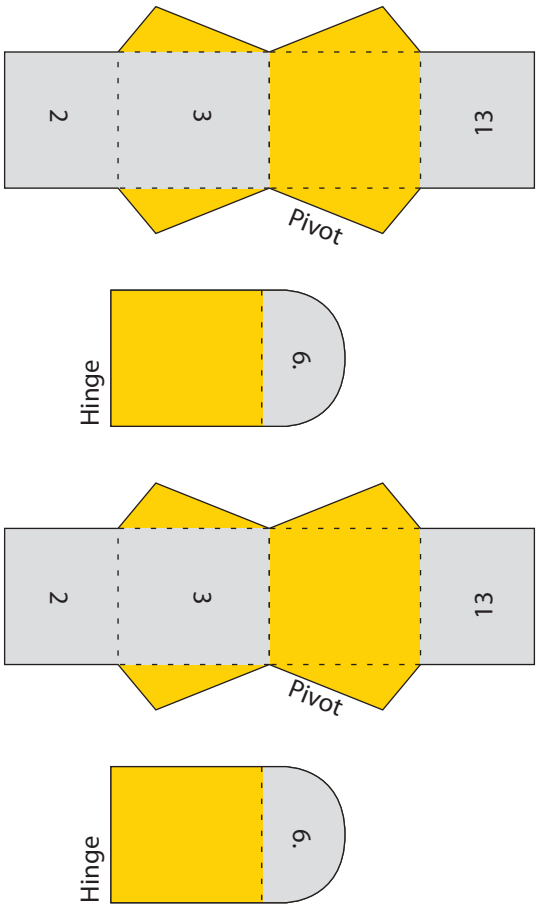
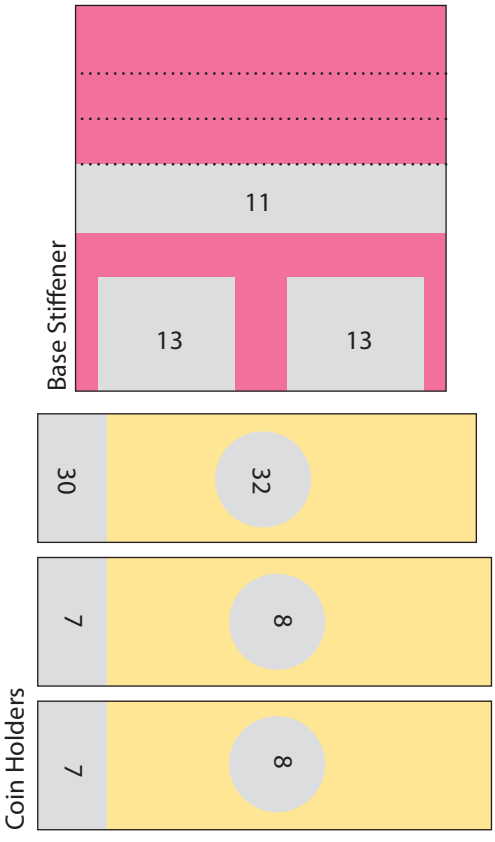
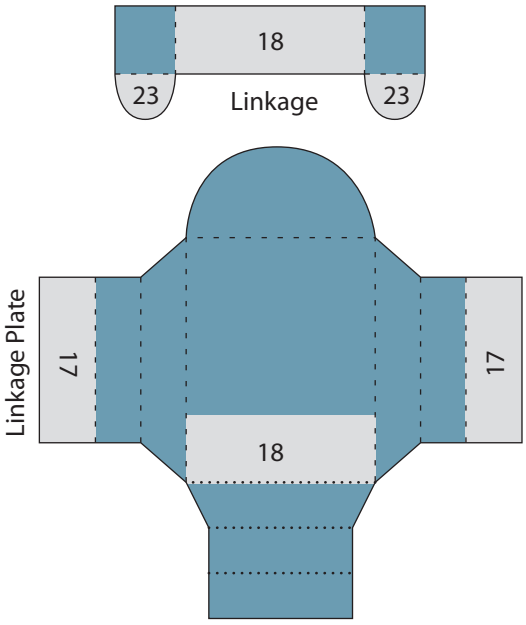
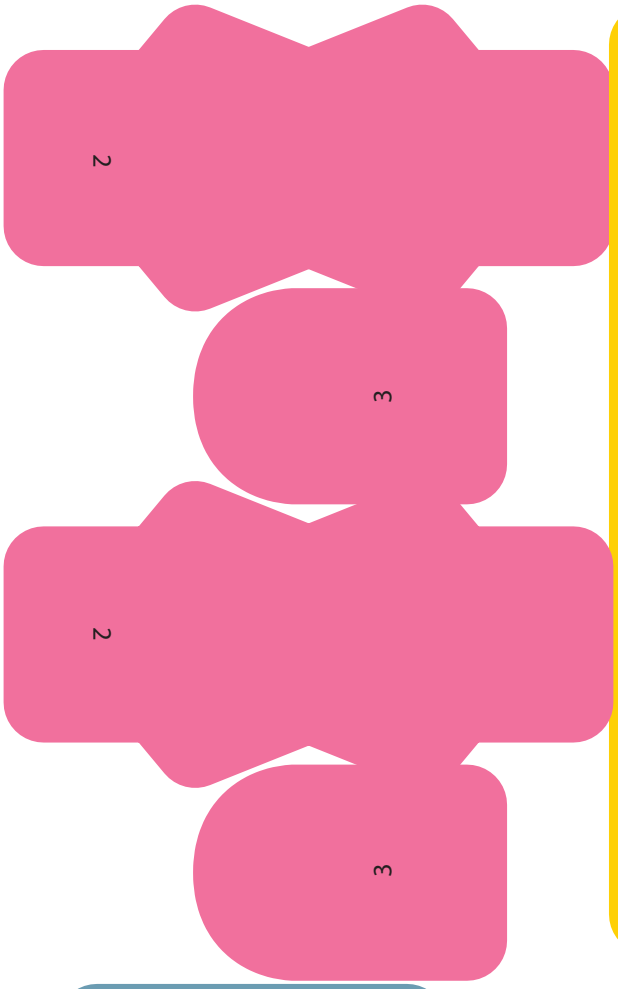


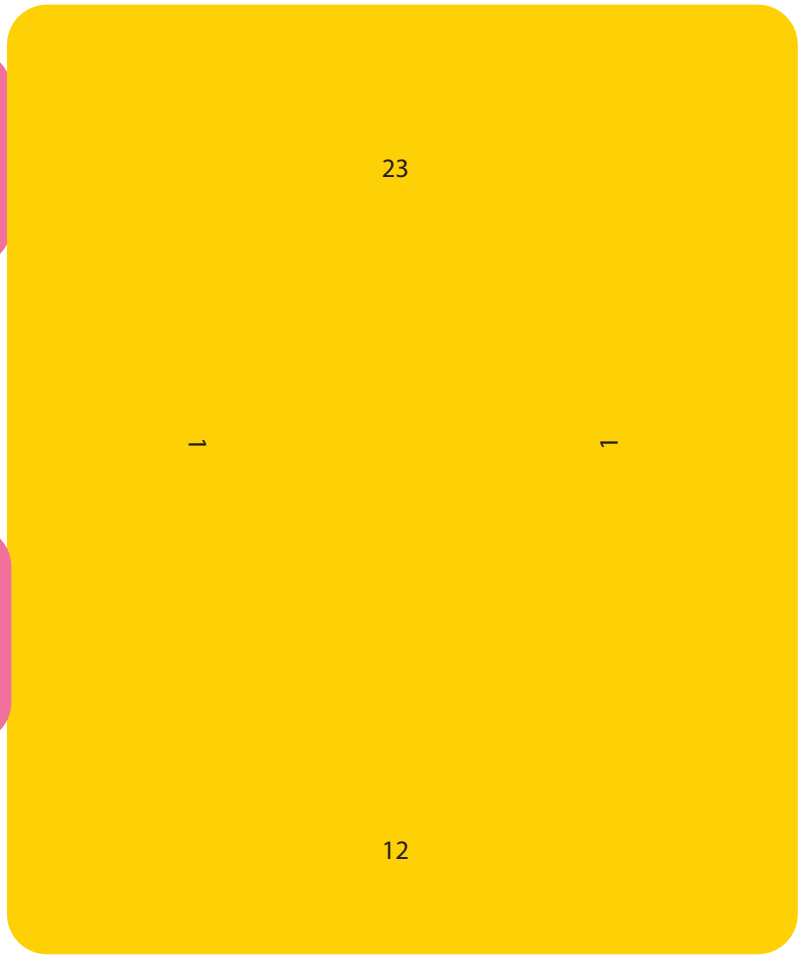



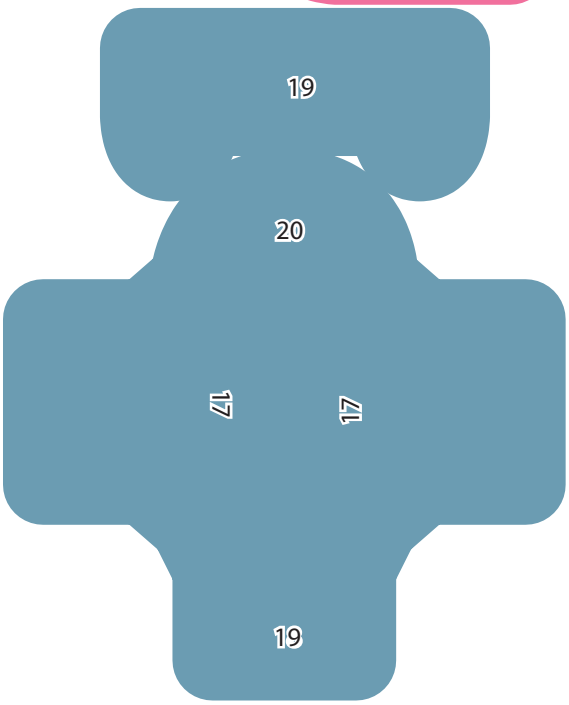



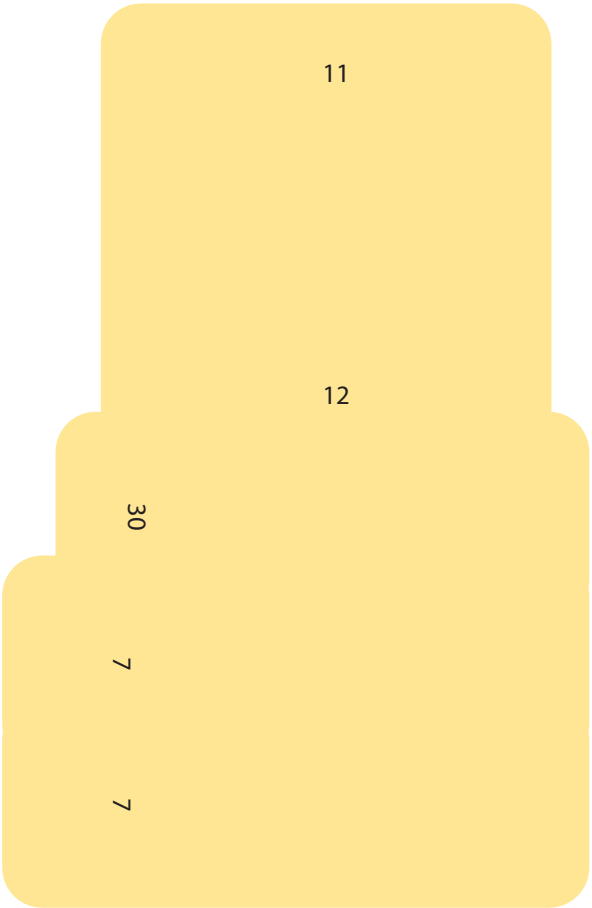




xor logic goat : Parts front 2

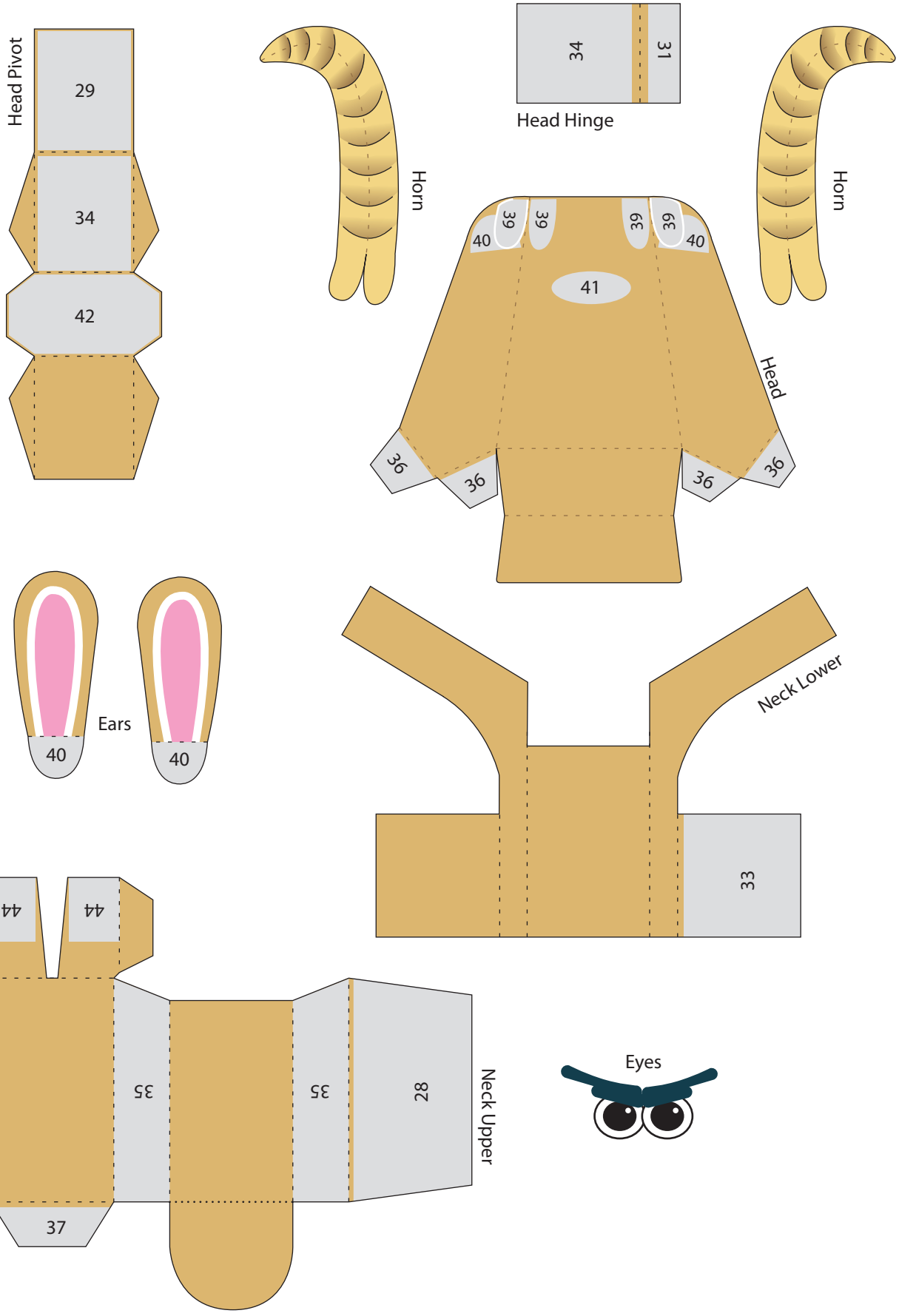


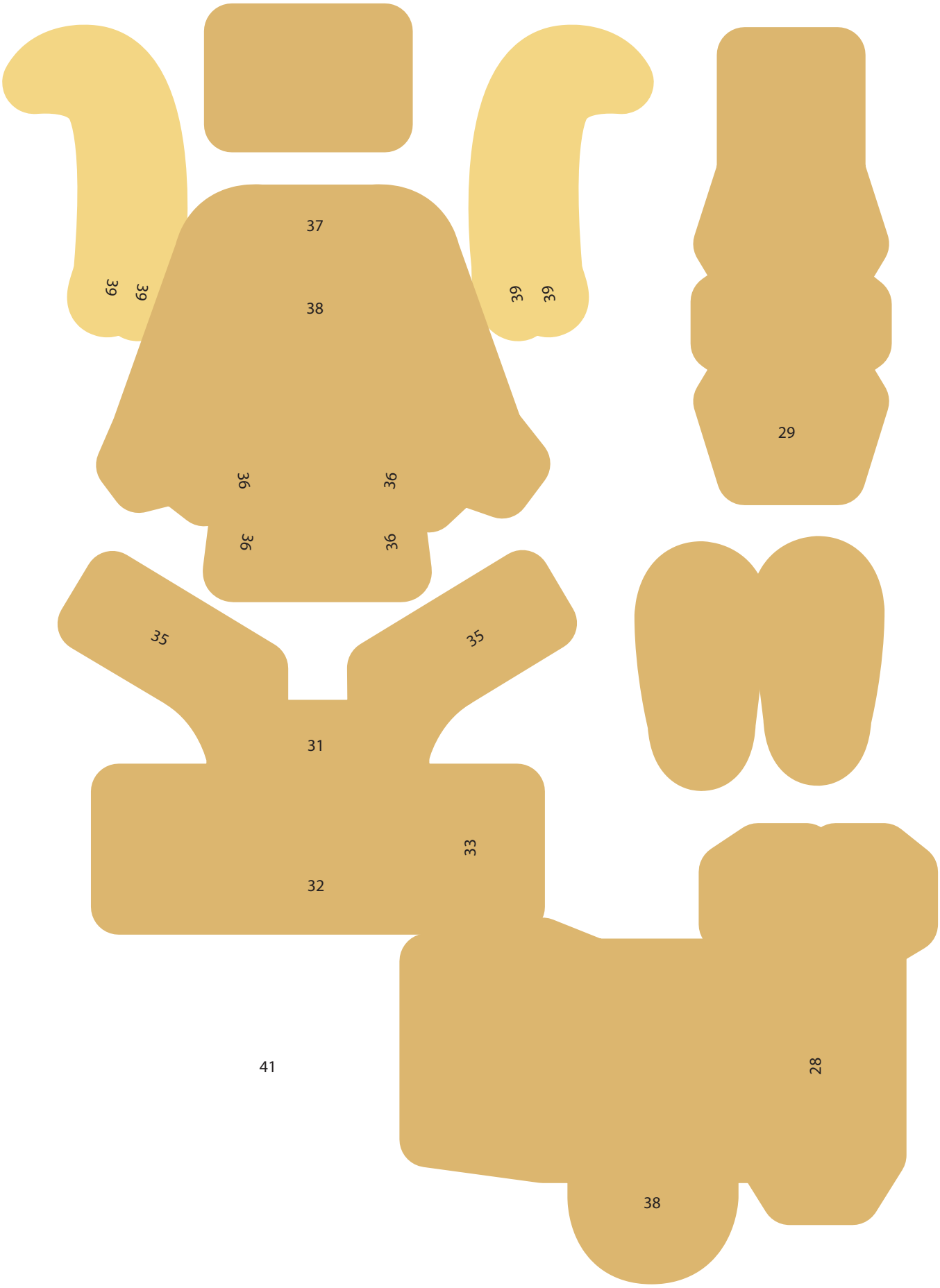



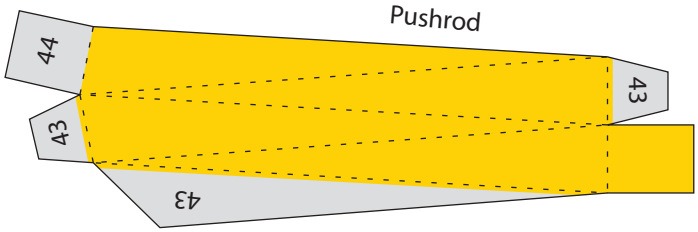

xor logic goat : Parts back 2

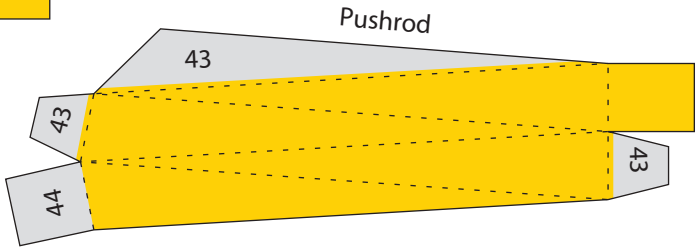


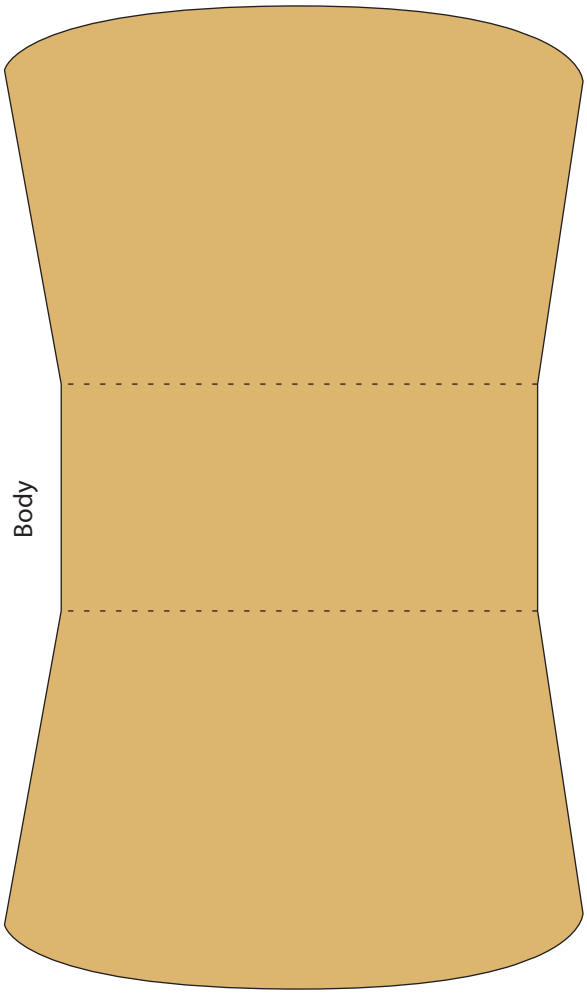

xor logic goat : Parts front 3

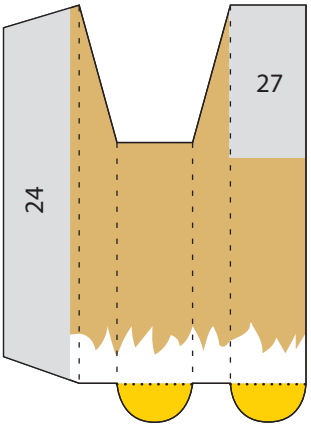


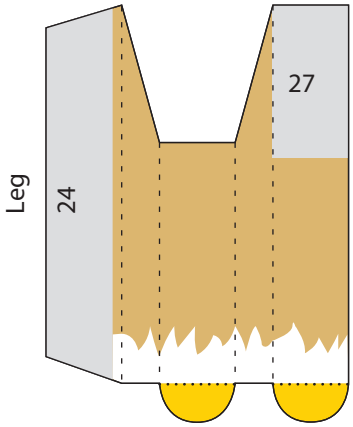

xor logic goat : Parts back 3

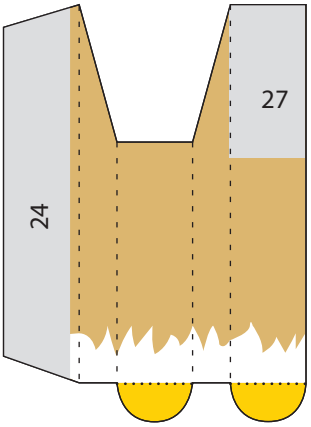


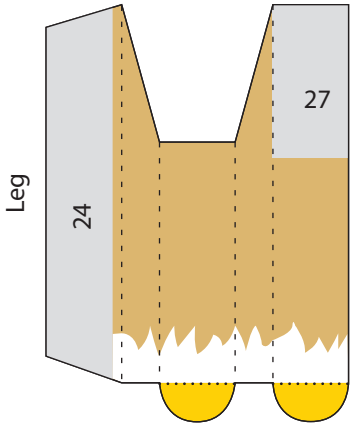




xor logic goat : Parts front 4

xor logic goat : Parts back 4

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Body Inner
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Body Inner


Box
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LOGIC GOAT
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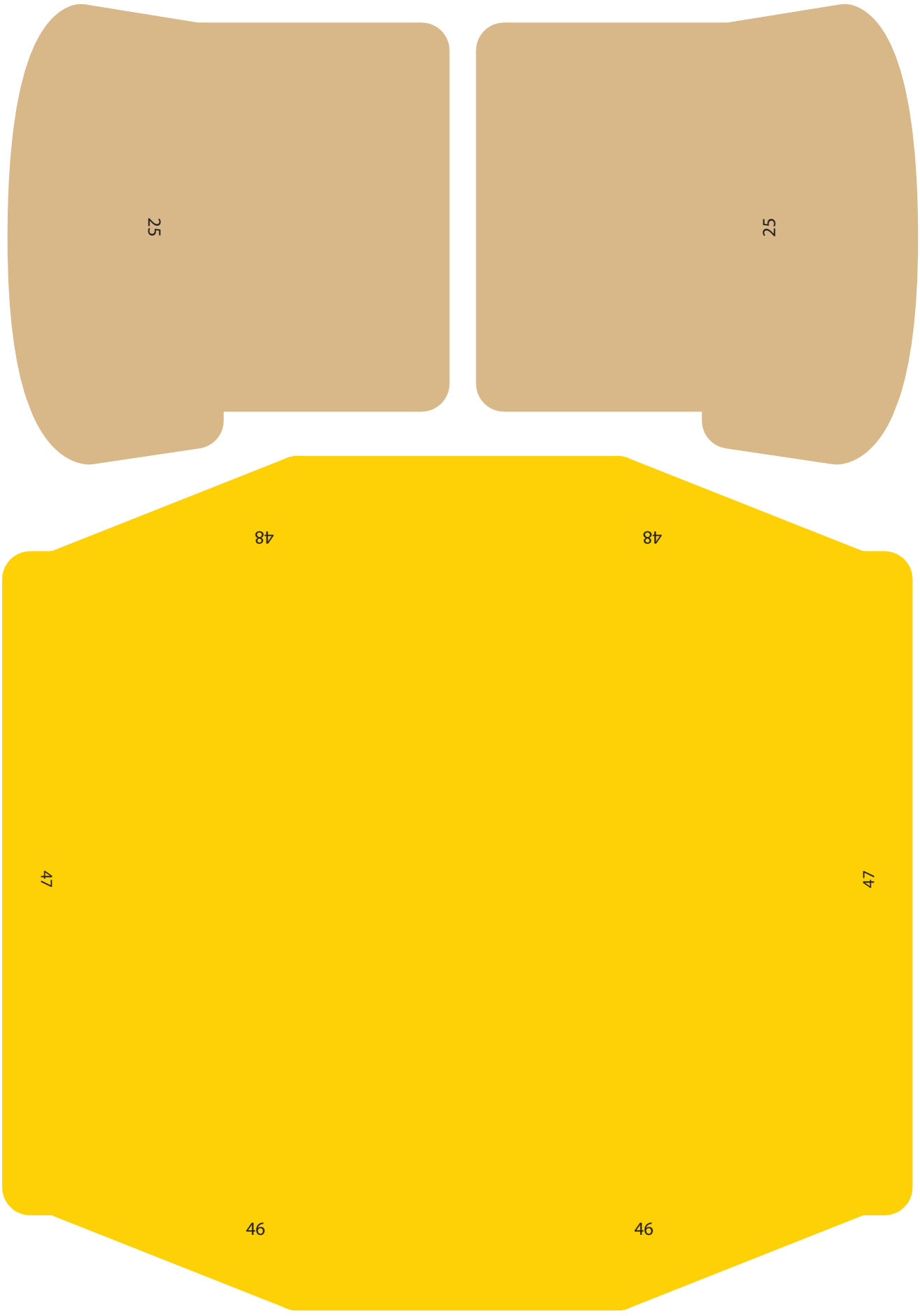


xor logic goat : Parts back 5