

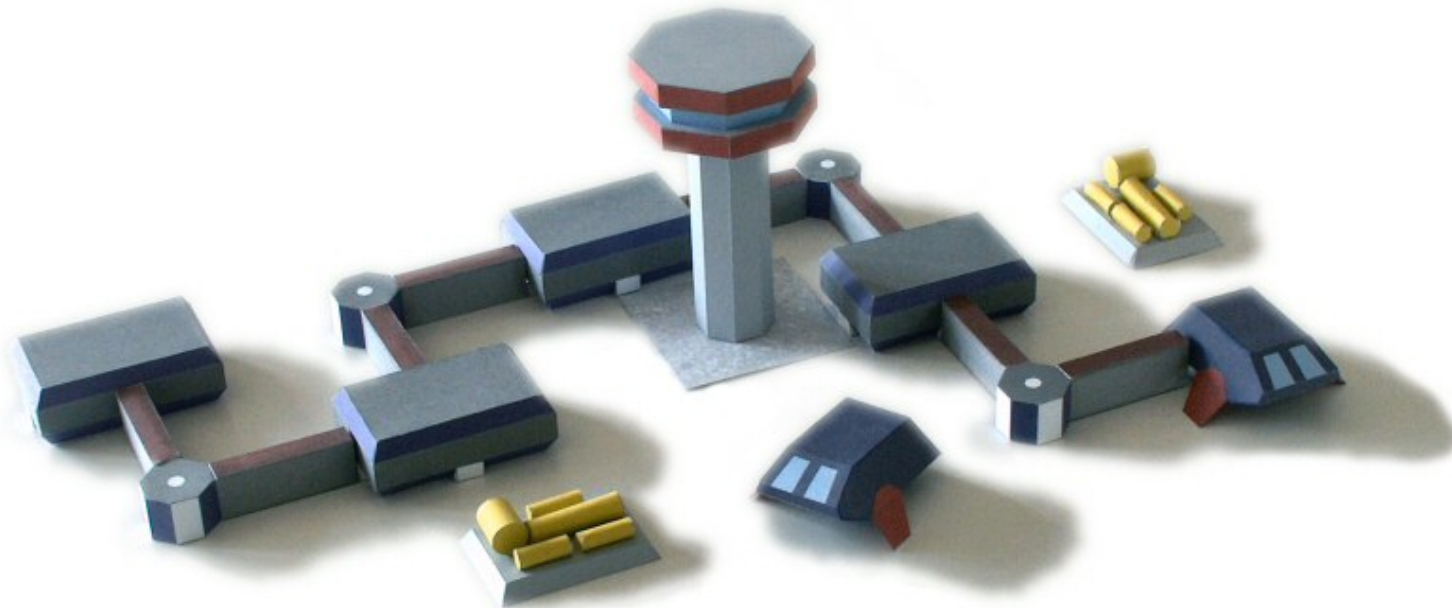
Moon Base

Armada Model Designs Ltd

SF04B-14

For the adventurous, a Moon Base is an appealing concept, but what would spur such a development? Due to the expense it is unlikely that personal gratification alone would warrant the creation of a "hotel" on the moon. Exploitation of the Moon's resources is perhaps more likely to trigger the creation a permanent Lunar settlement. Maybe you could conduct a literature survey to find out which raw materials scientists believe would benefit us? The Moon certainly attracts a lot of attention. Japan, India, China, Europe and the USA have all sent probes to the moon.

Of course, valuable natural resources are of strategic importance and it is not too far-fetched to imagine that disputes between interested parties could result in armed conflict and perhaps the first lunar war? This would be a far cry from the Moon landing of 1969 that stated "We came in peace for all mankind". At the beginning of the 21st century NASA planned "The Constellation Programme", to send men back to the moon on a rocket called Ares - the Greek god of war and bloodlust! Sounds like this Lunar war's a "done-deal". Eventually, the Obama administration (wisely?) cancelled the Constellation Programme.



Although America has currently ruled it out, other organisations still harbour aspirations to go to the Moon. ESA initially sought involvement in the Constellation Programme, then collaborated with Russia on a craft called CSTS before announcing a plan to adapt its own ATV to carry a crew into space. RFSA has been working on a craft designated PPTS with the aim of taking cosmonauts to the Moon and ISRO's probe Chandrayaan-1, along with NASA's LRO, was instrumental in discovering lunar water. ISRO, CNSA and JAXA all have plans for future unmanned Moon landers as precursors to subsequent manned lunar missions.

ACRONYMS **CNSA** - China National Space Administration, **ESA** - European Space Agency, **ISRO** - Indian Space Research Organization, **JAXA** - Japan Aerospace Exploration Agency, **NASA** - National Aeronautics and Space Administration, **RFSA** - Russian Federal Space Agency, **ATV** - Automated Transfer Vehicle, **CSTS** - Crew Space Transportation System, **LRO** - Lunar Reconnaissance Orbiter, **PPTS** - Prospective Piloted Transport System

The card model kit contained in this document is 1/250 scale (6mm scale) and includes modular accommodation / technical areas with access corridors, chemical storage tanks, and a control tower. Although advanced sensing and monitoring equipment makes the requirement for an expensive control tower highly debatable, it nevertheless looks aesthetically pleasing! Also included is a shuttle-craft for ferrying equipment and personnel between lunar-surface and Earth-orbit.

Perhaps you could conduct an additional literature survey considering the technical difficulties inherent in travelling to the moon and establishing a settlement. What advanced technologies would need to be developed? What features could be added or improved on our own speculative Moon Base model?

Instructions

The tools required for card modelling (referred to as paper modeling in the USA) are generally to be found around the home. This model requires 4 sheets of 160 gsm white card, scissors or a knife to cut out the components, a ruler for scoring straight lines and some glue (PVA white-glue, used sparingly is best but Uhu, Bostick or even Pritt Stick will do). Careful scoring of fold-lines is the key to accuracy of shape. Score-lines can be made using a pin or perhaps a blunt craft knife.

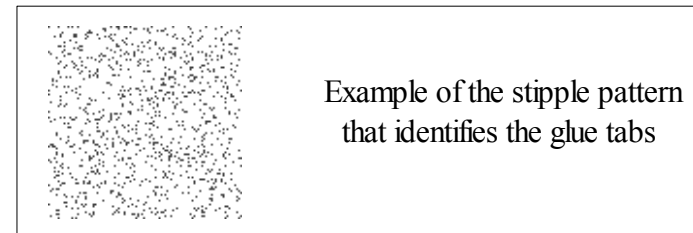
The four model sheets contain the following components:

Sheet 1 – Moon Base modules and module connectors (parts 1 and 2)

Sheet 2 – Control Tower (parts 3 to 7)

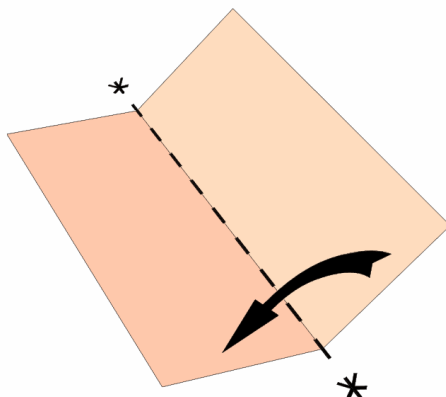
Sheet 3 – Inter-module corridors and corridor junctions (parts 8 and 9)

Sheet 4 – Shuttle craft and chemical storage (parts 10 to 16)



This document also contains plain white model sheets to allow for builder-created colour schemes.

Cut around all solid lines. Cut out each piece as you need it. In this way you will reduce the risk of confusing one piece with another. Glue-tabs are denoted by a stippled pattern, as illustrated above.

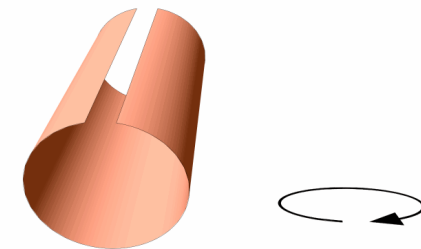


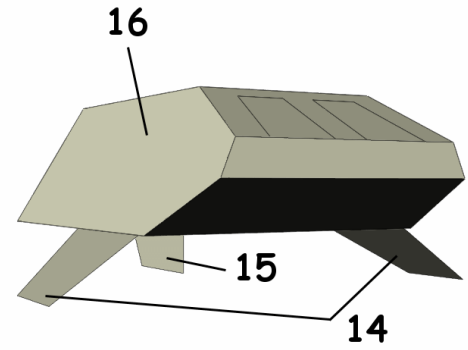
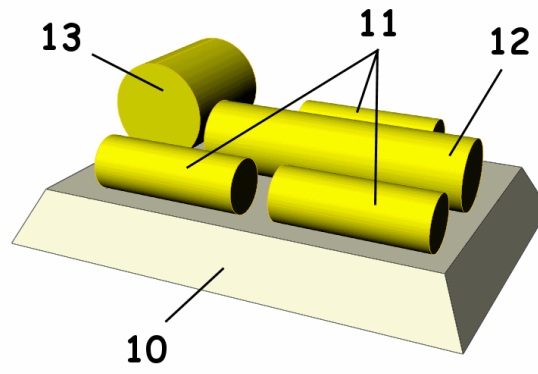
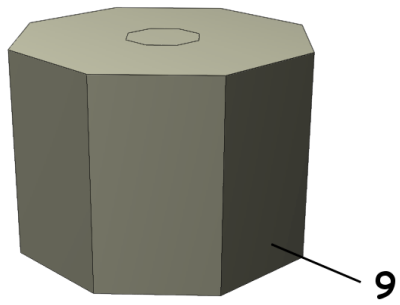
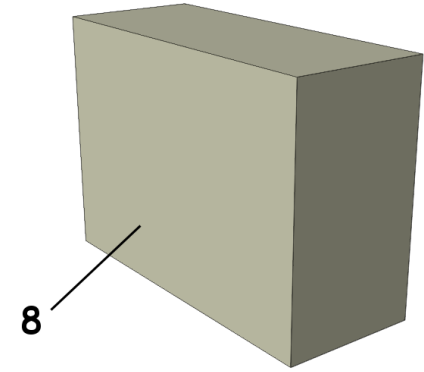
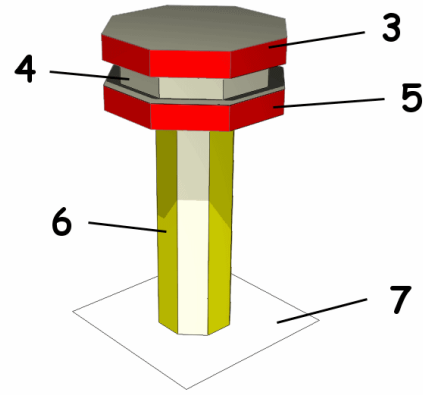
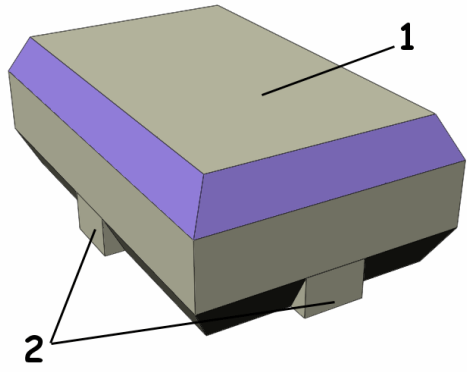
Look at the images of the assembled items carefully. Fold lines will need to be scored first. All folds are so-called crest folds, apart from 2 folds on each of the shuttle fins, which are valley-folds. A valley fold is illustrated in the adjacent image – It is denoted on the model sheet by a dashed line with a cross through the final dash.

Some components, like the chemical-containers, need to be rolled to create the correct shape. Where a component requires rolling, this is indicated by a broken ellipse with an arrowhead (see illustration on the right).

As with all card models the finished item can be enhanced by touching up the white edges with water colour paint.

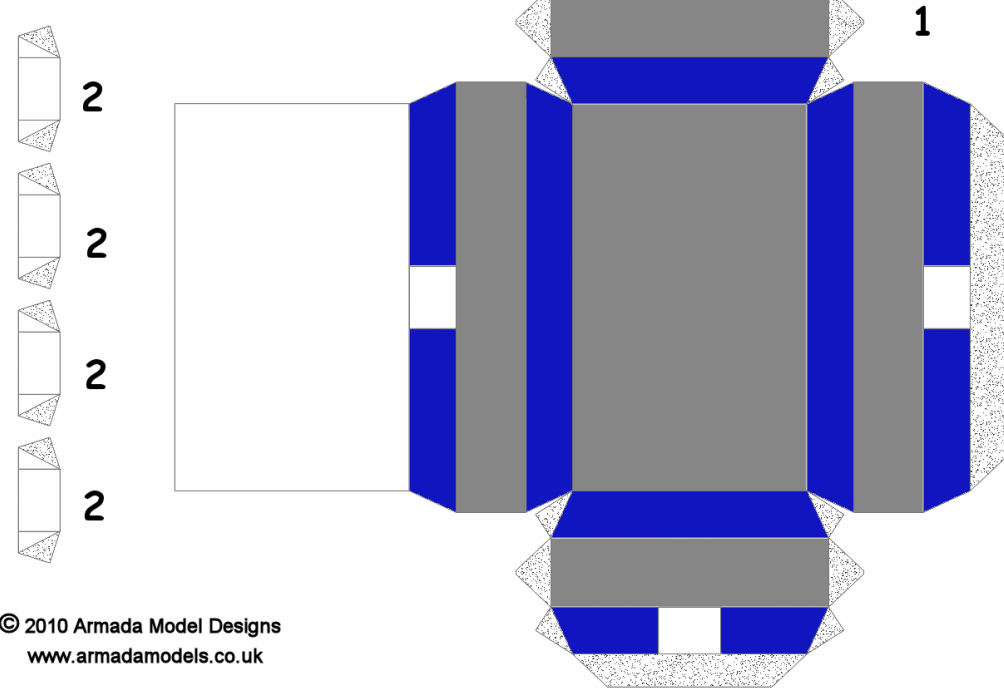
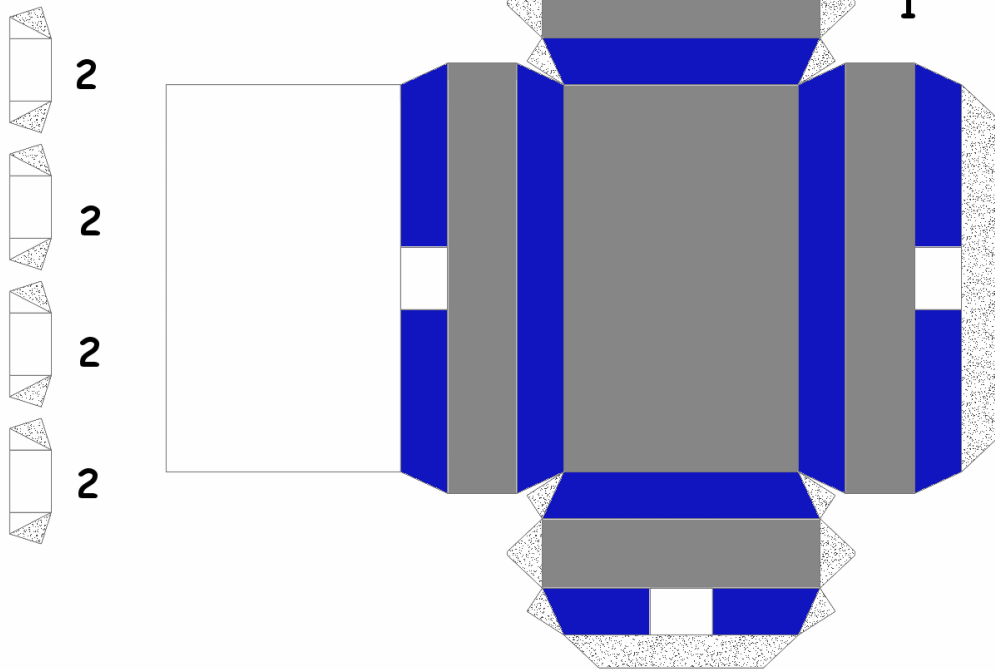
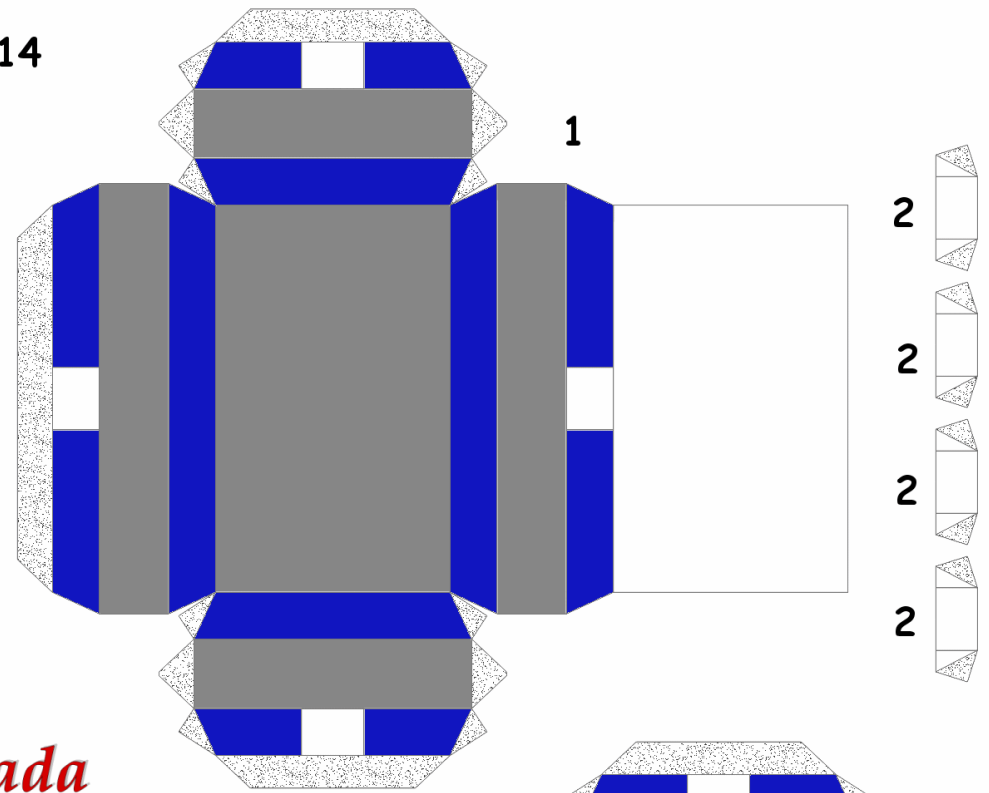
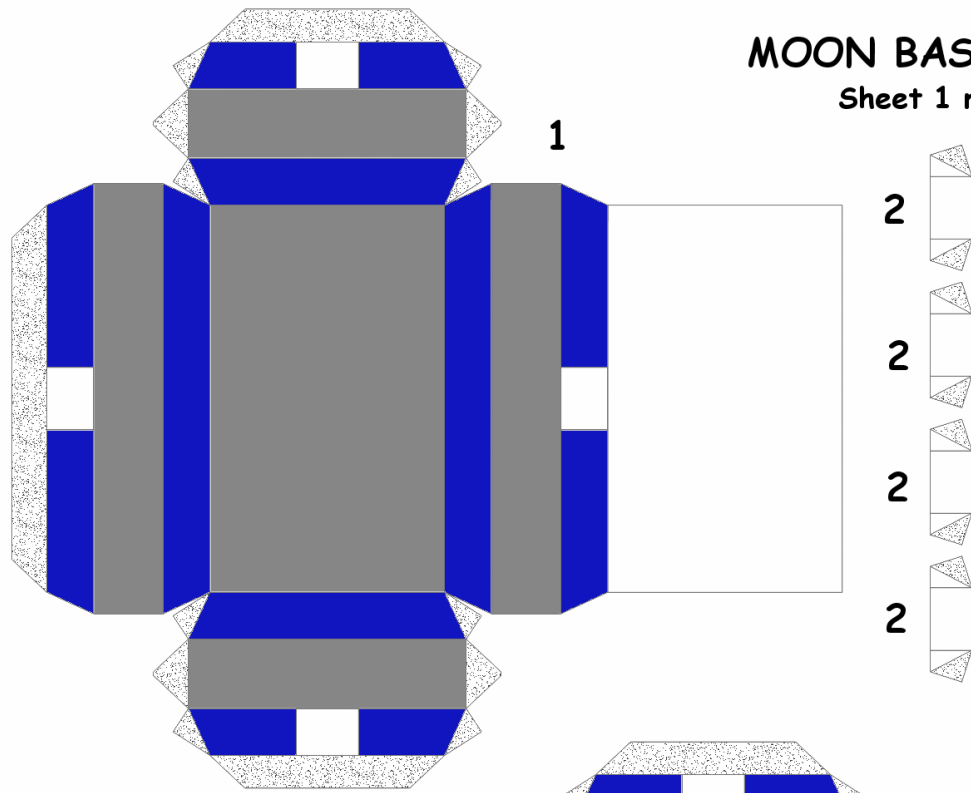
Happy model building!





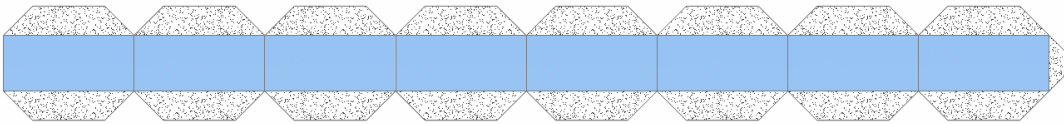
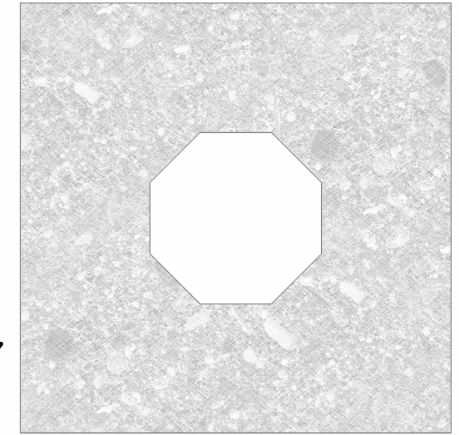
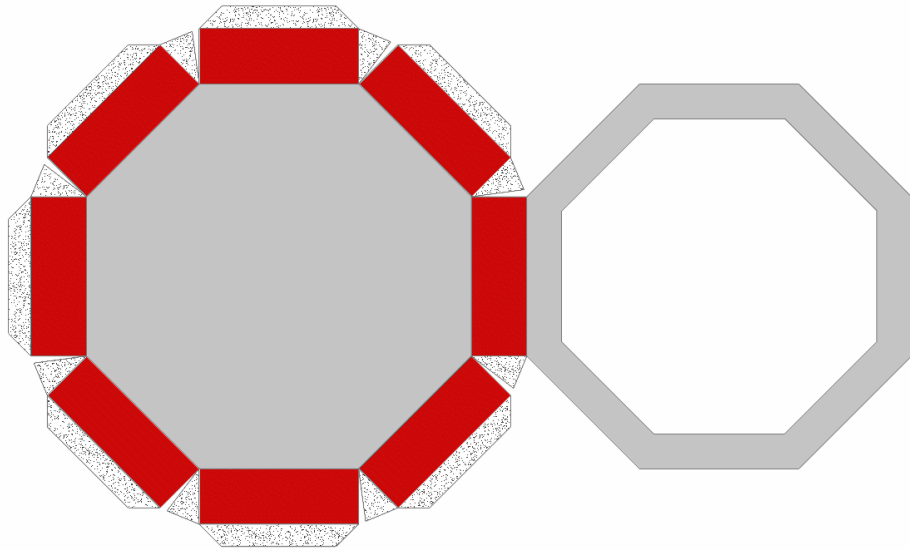
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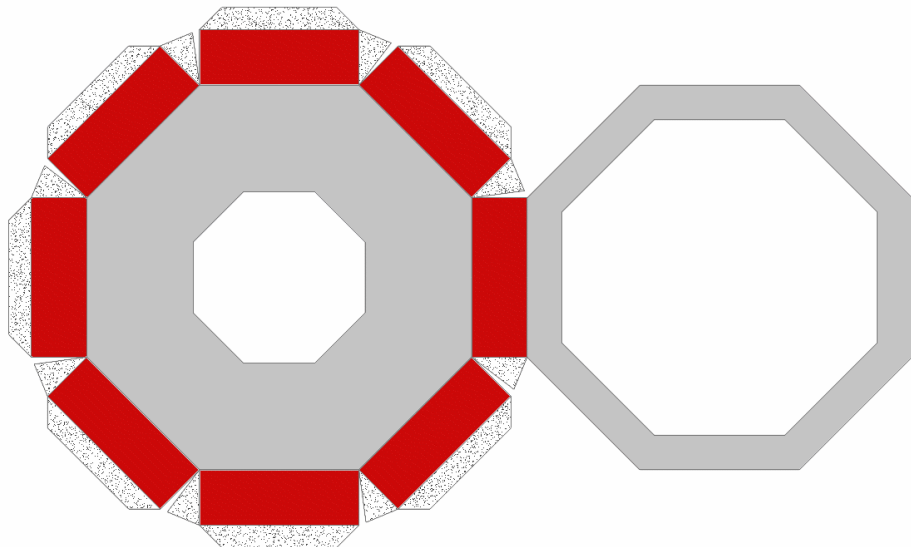


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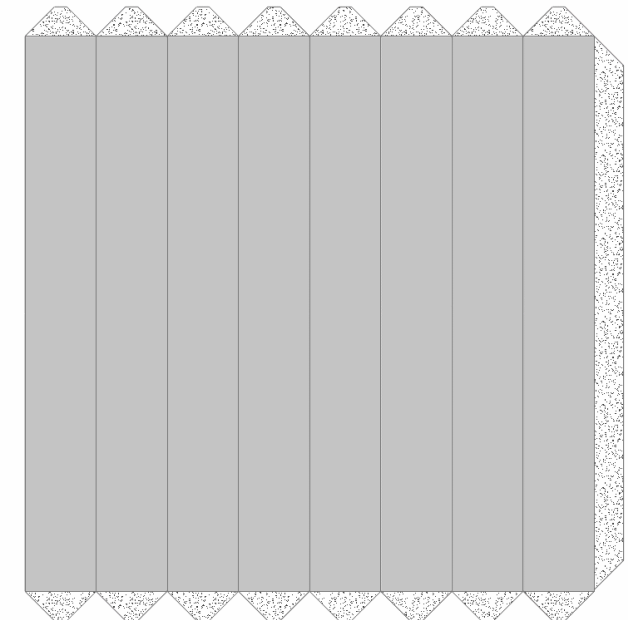
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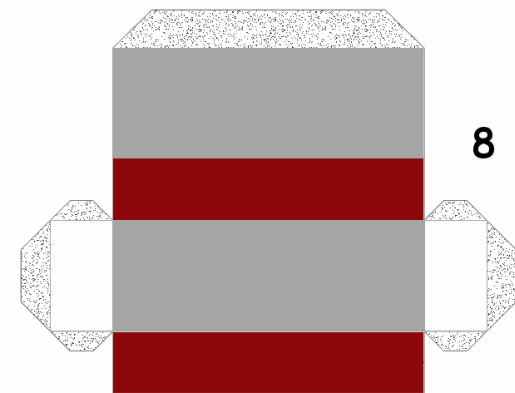
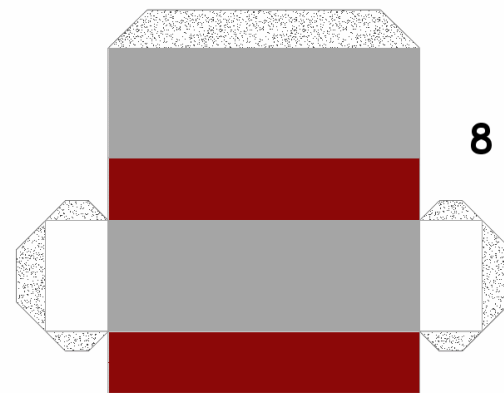
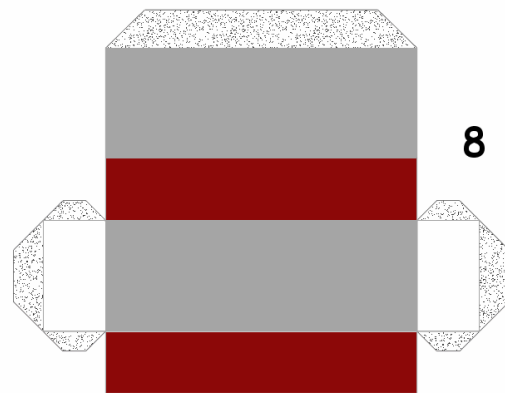
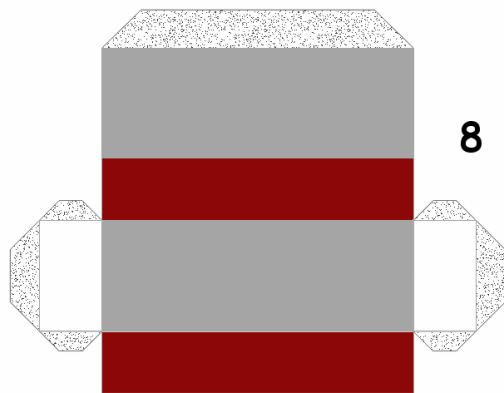
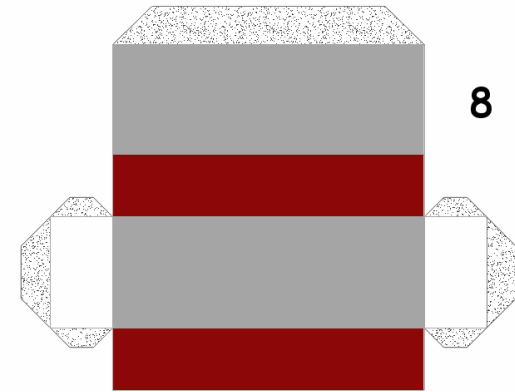
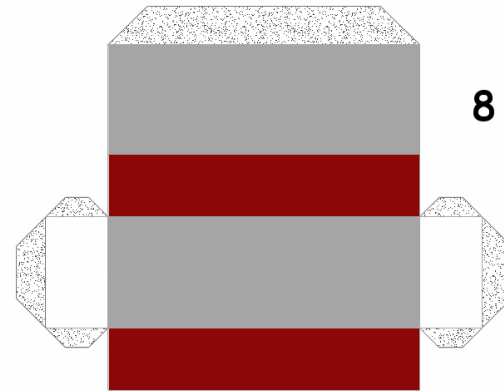
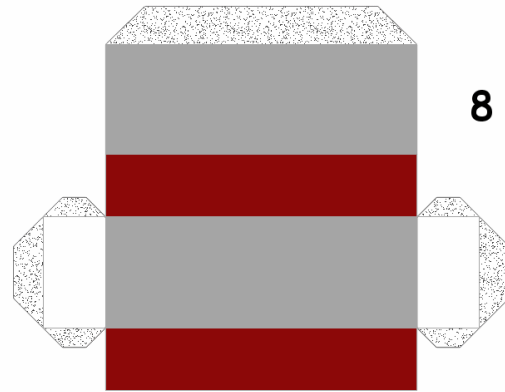
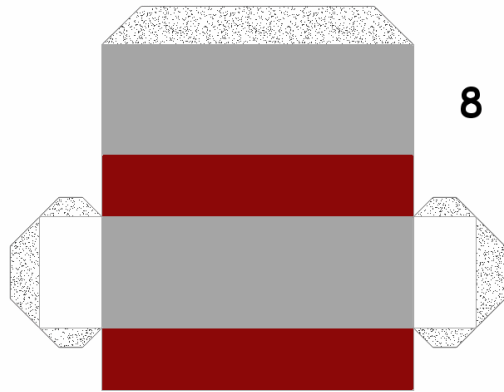
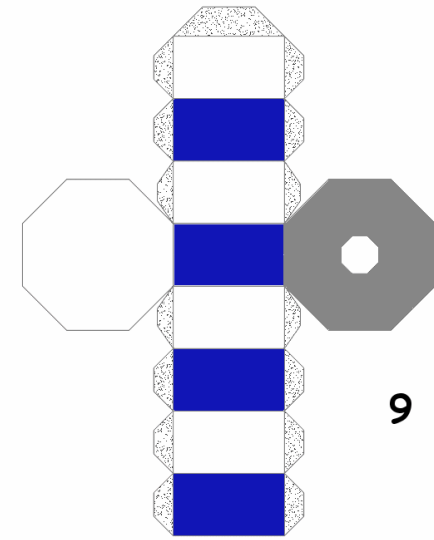
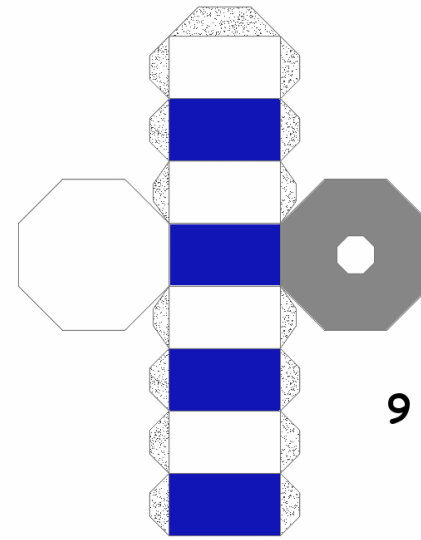
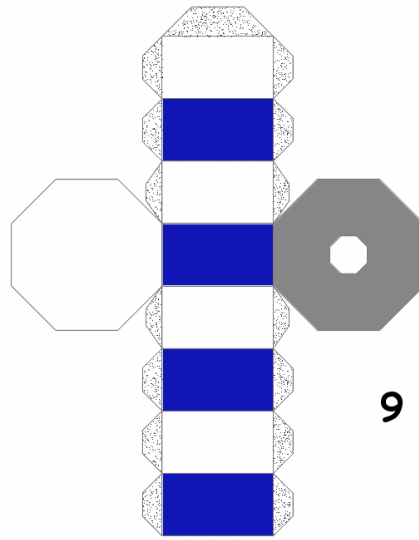
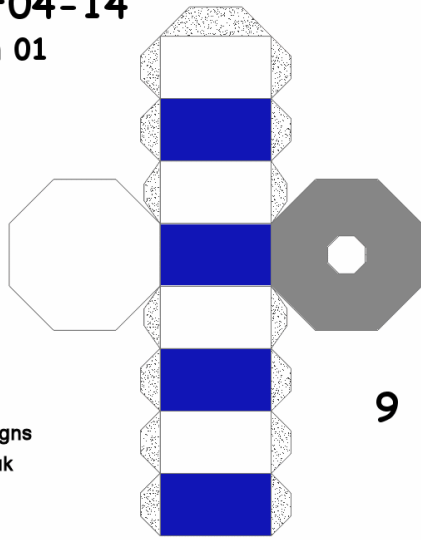
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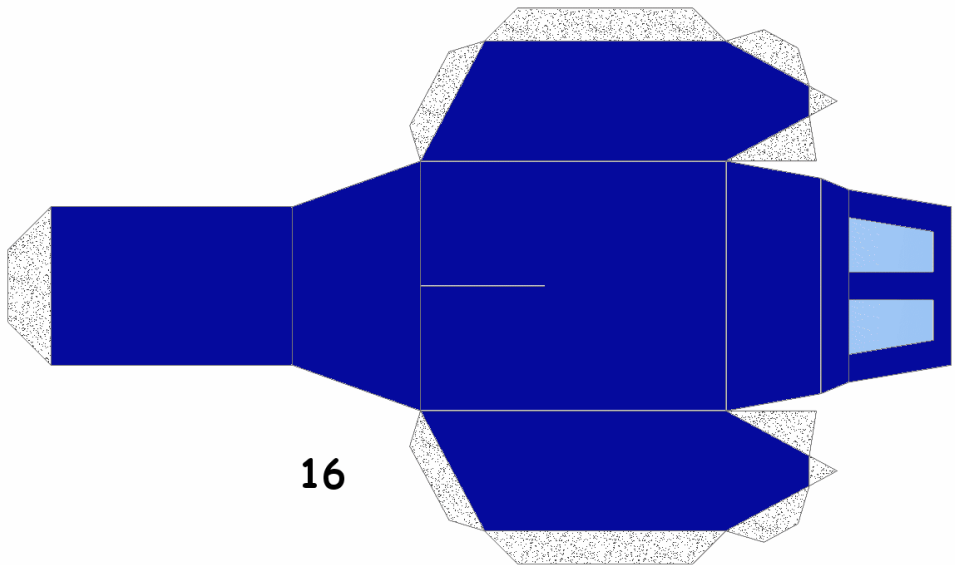
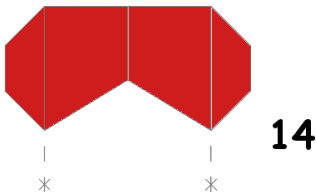
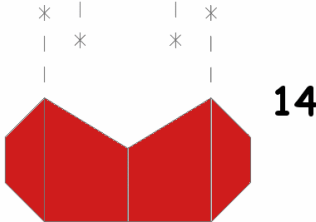
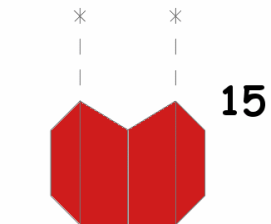
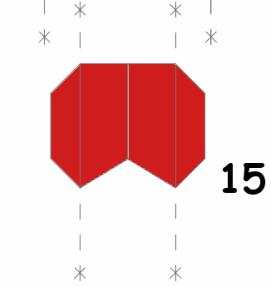
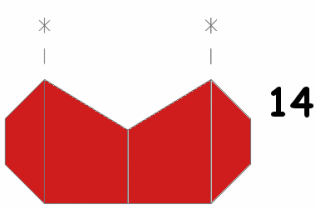
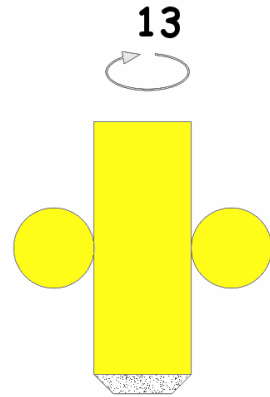
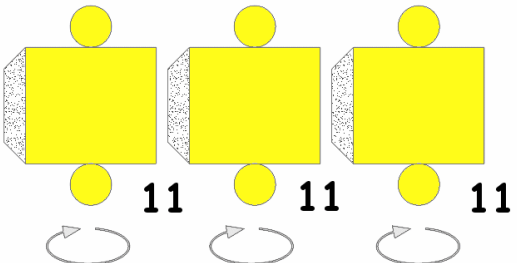
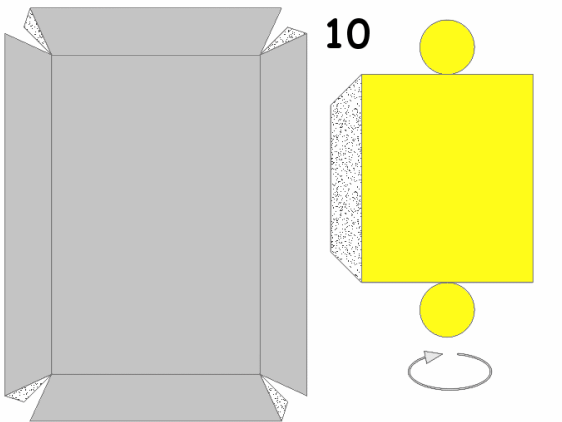
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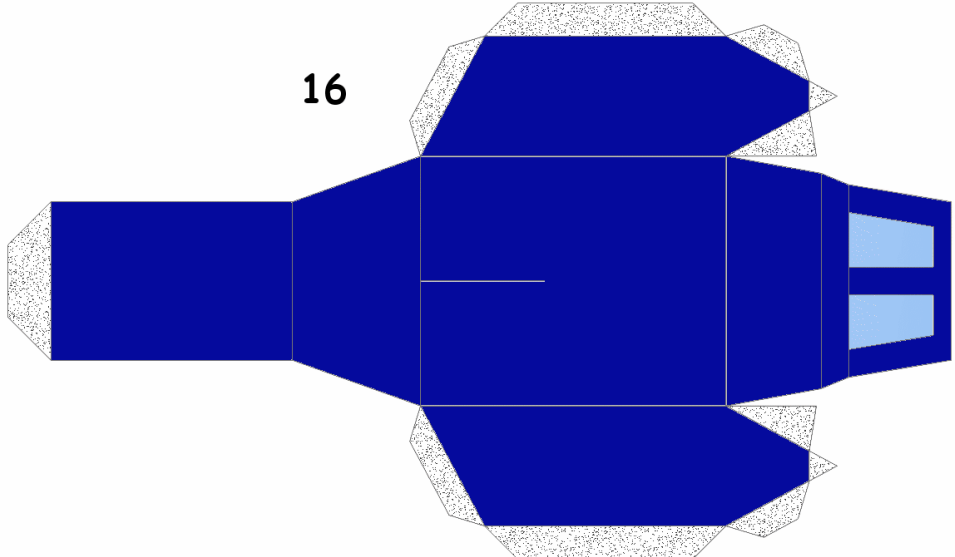
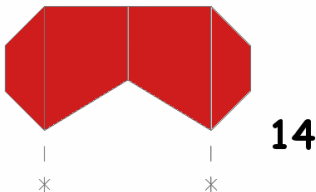
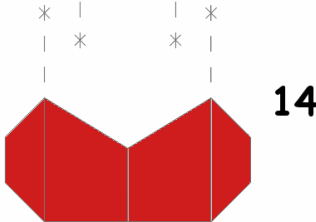
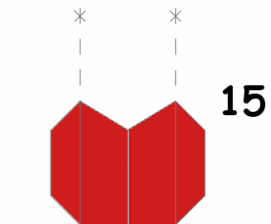
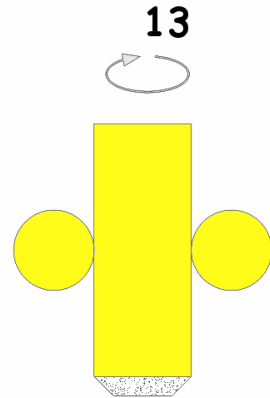
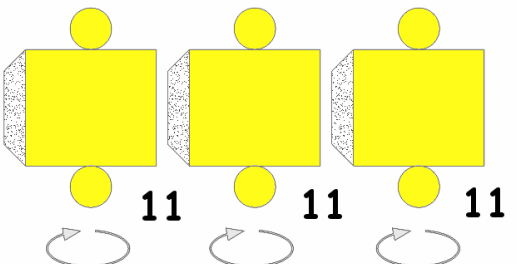
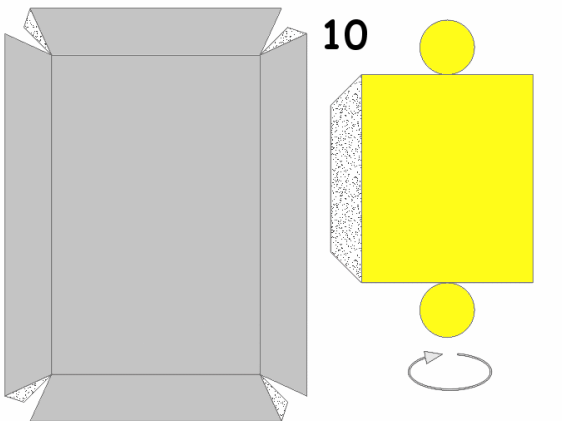
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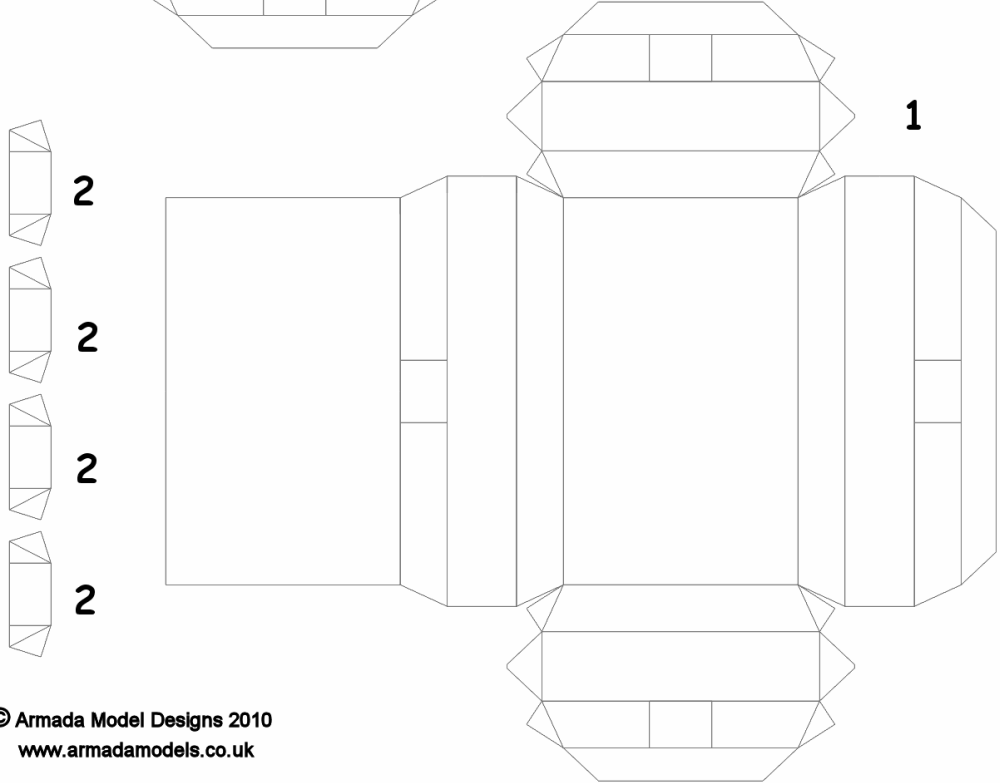
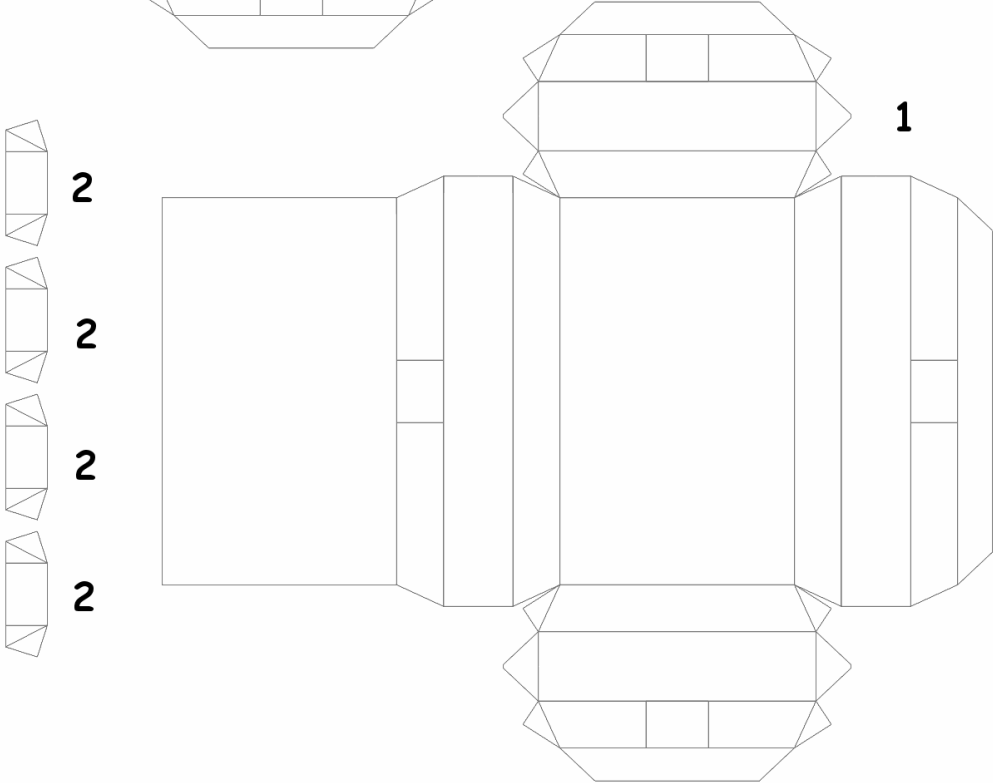
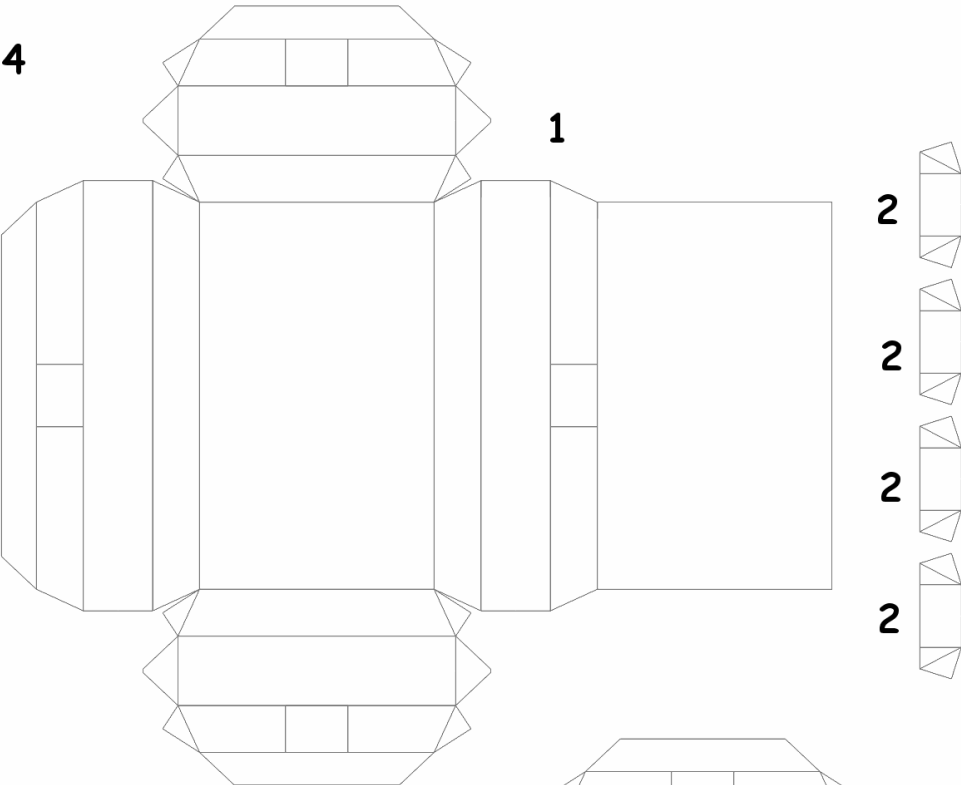
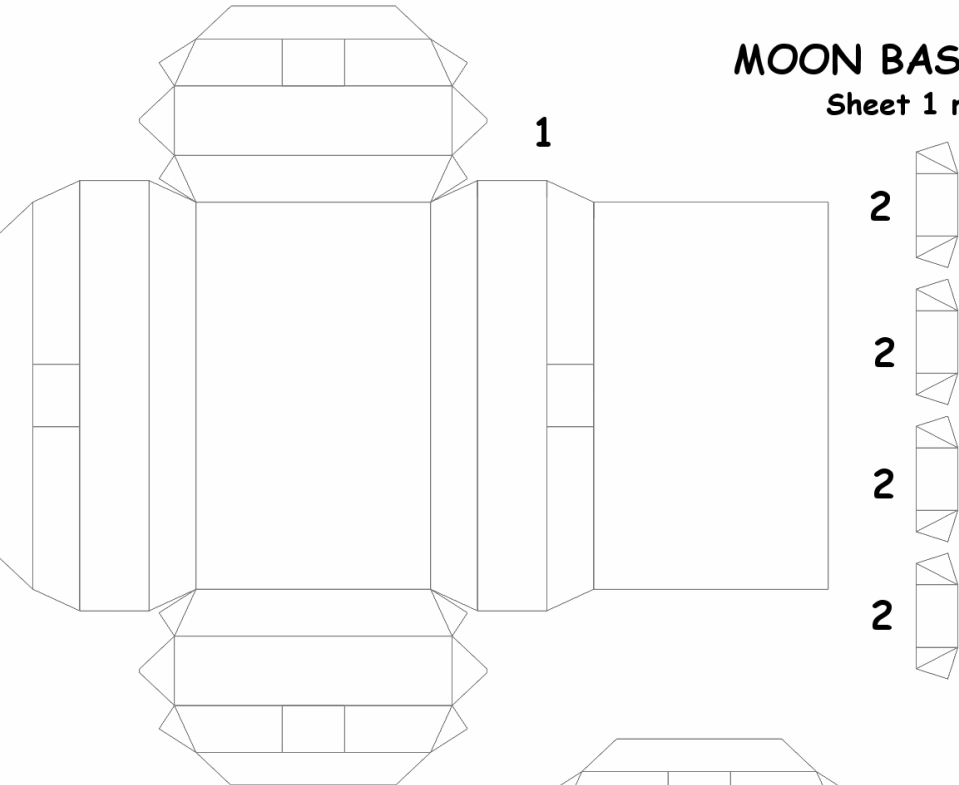
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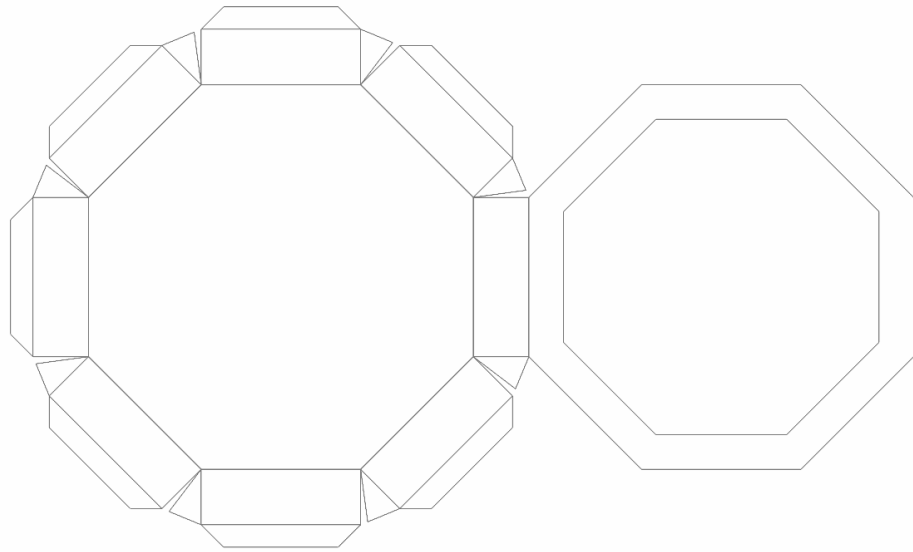
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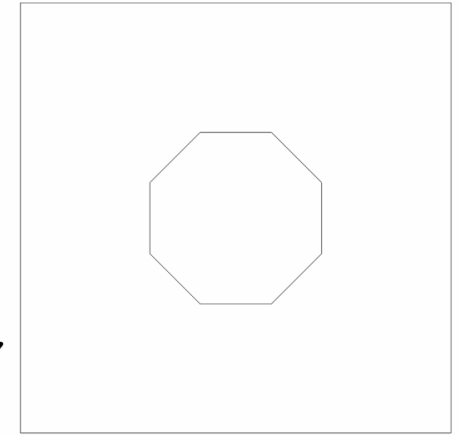


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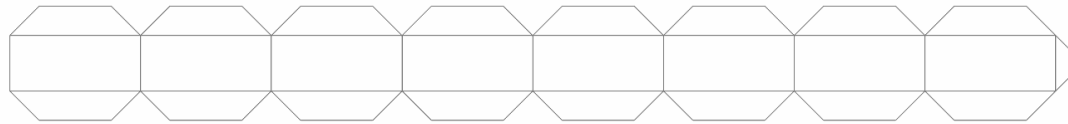
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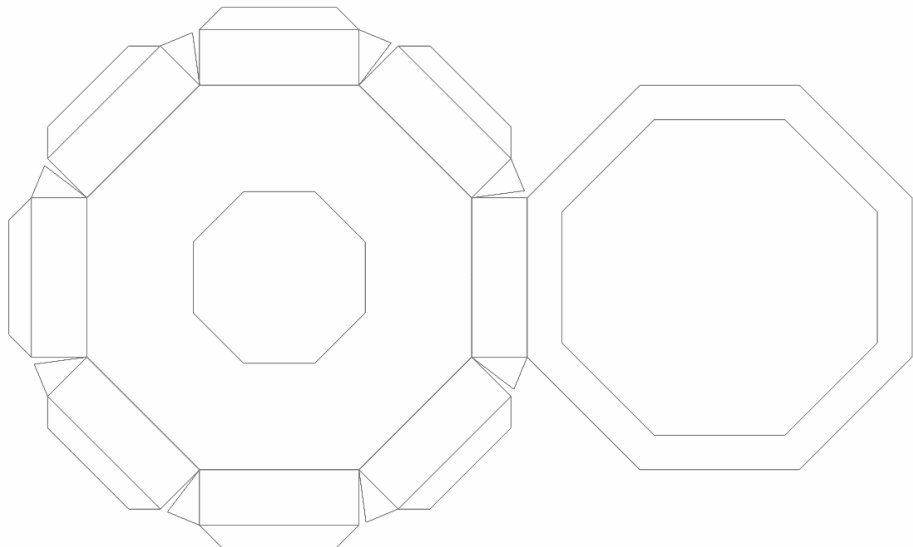
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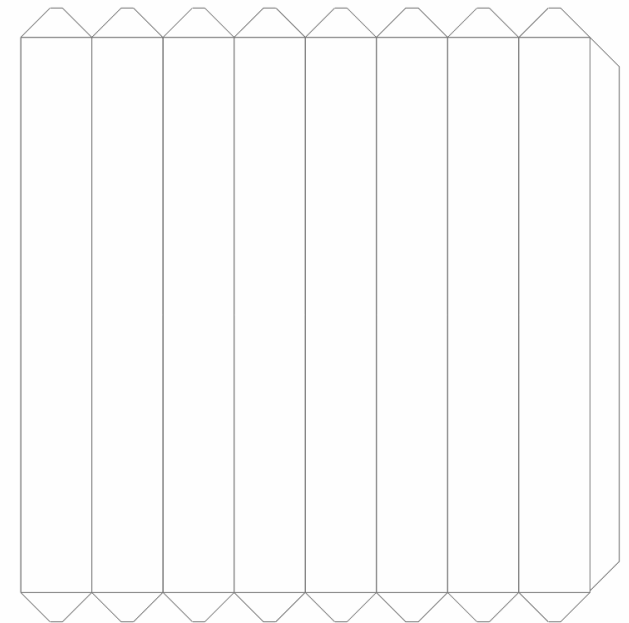


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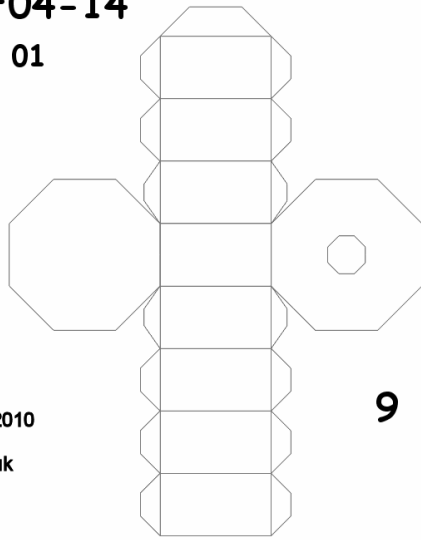


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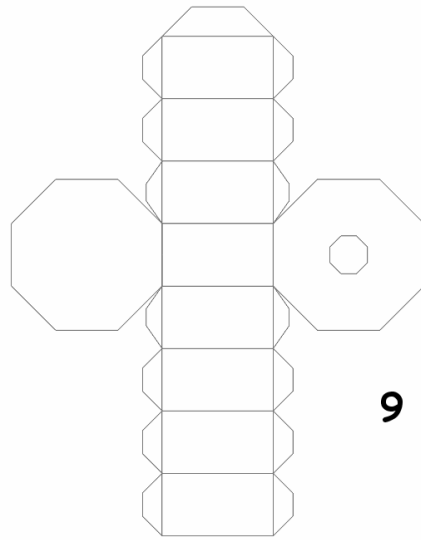
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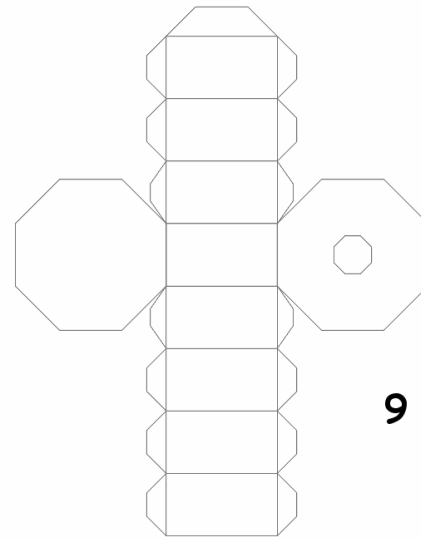
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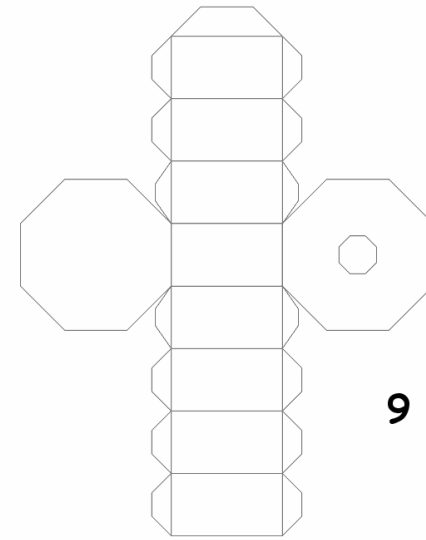
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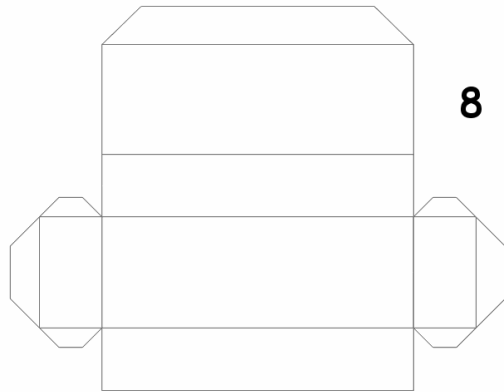
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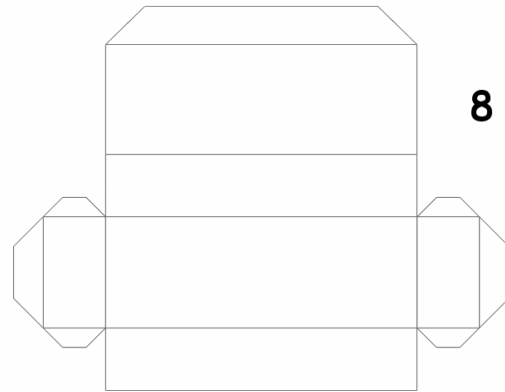
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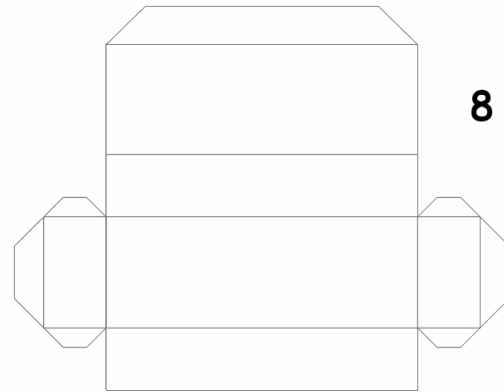
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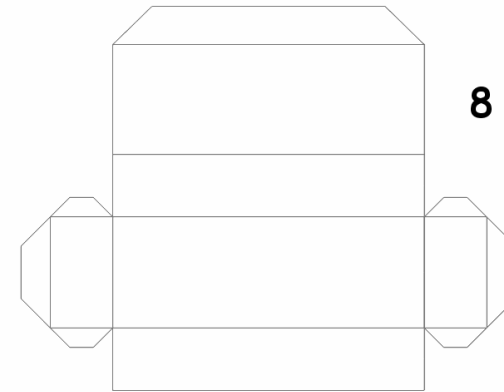
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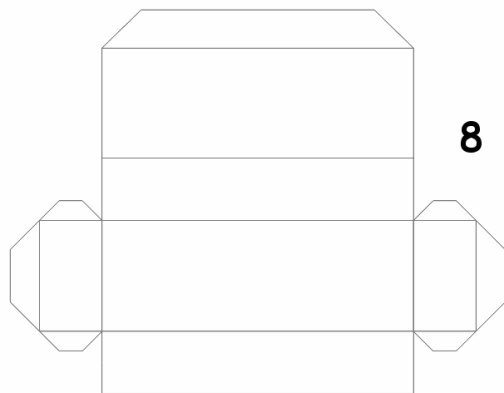
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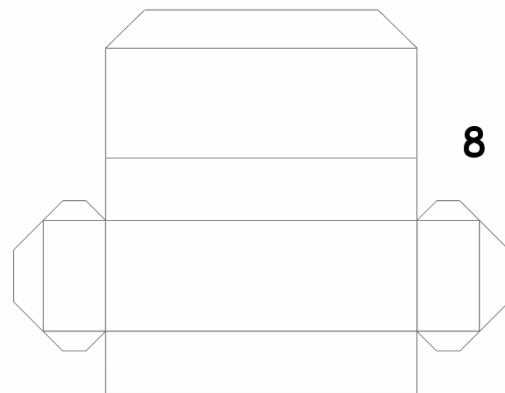
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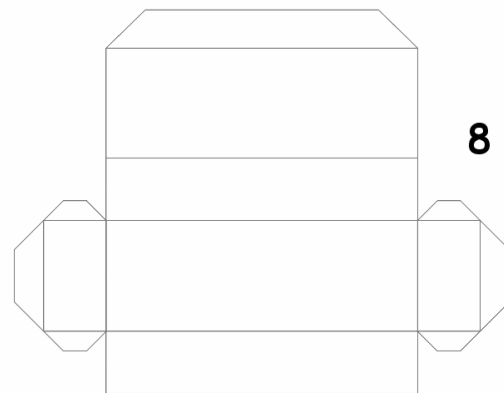
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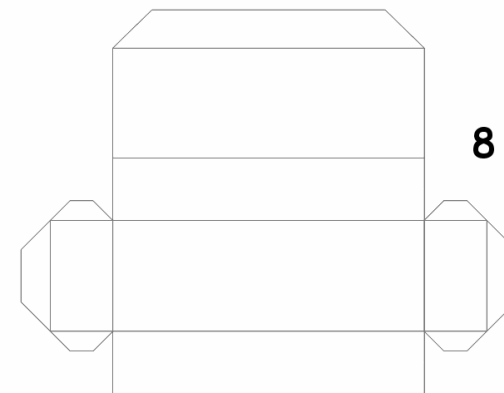
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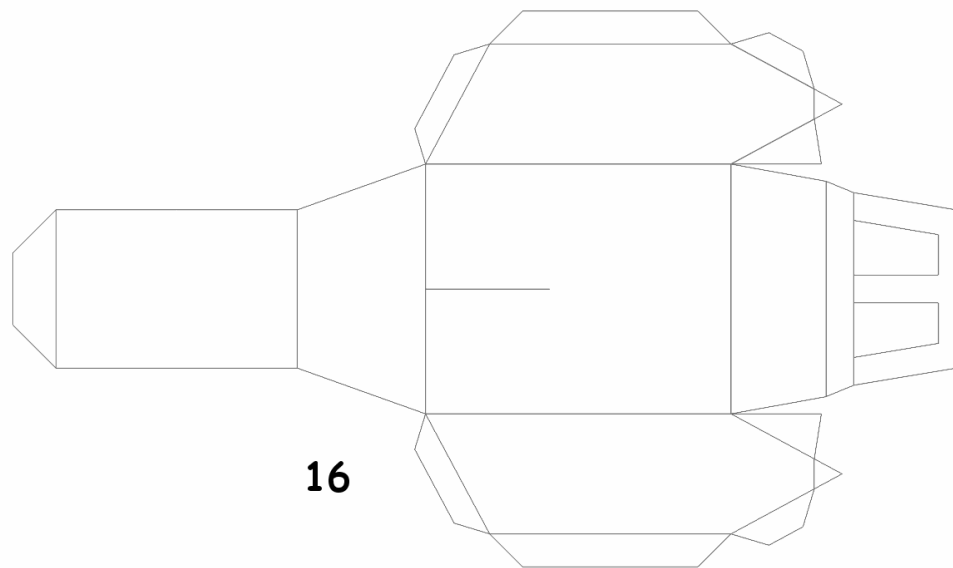
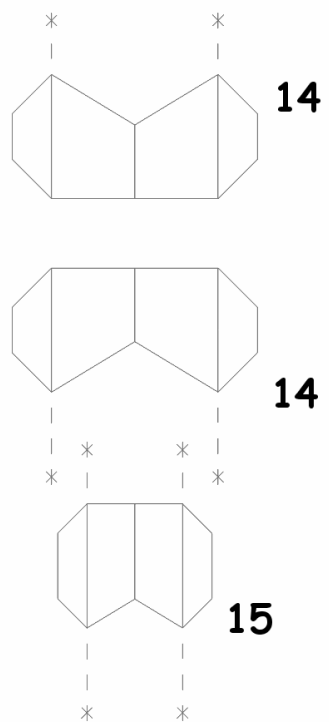
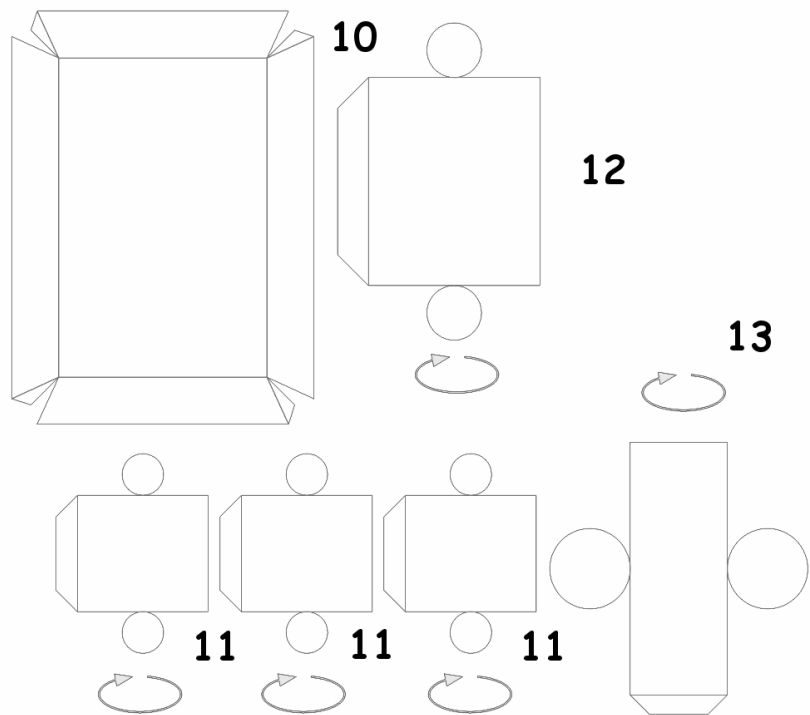
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