

## How to tighten the screws

1. It is always recommended to tighten the screws deep enough. The tighter the screws are, the more stable a puzzle will be (and probably more stiff while making turns).

2. Always leave a little bit of radial space along the screw so that the center cap can be lifted by around 1~2mm for single layered models.

\*\*For those in-between models, like #65, #85, #88, #89, it is recommended to tighten further.

\*\*For neat multiple layered models like #61, #75, #87, tighten the screws to their full depth.

3. Rules of thumb. Tension adjustment is in general dependent on personal judgement. Different tension could result in very different feel. Start with simple models and accumulate your own sense. Use different springs, screws, nuts if you think the default set can't provide your favorite handle.

4. Previous description of sticking screws out of nuts by 1-3mm is misleading in some cases and is not anymore recommended. Reason: the height of caps varies in different models.

VeryPuzzle  
2021/08/06

# VeryPuzzle



Icosahedron 77

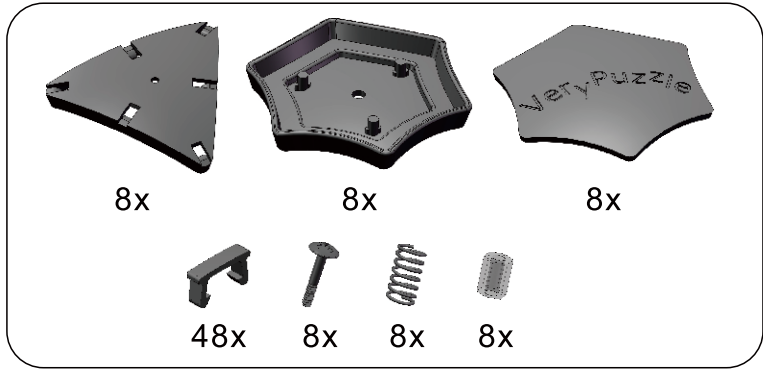
I3-C1

#68

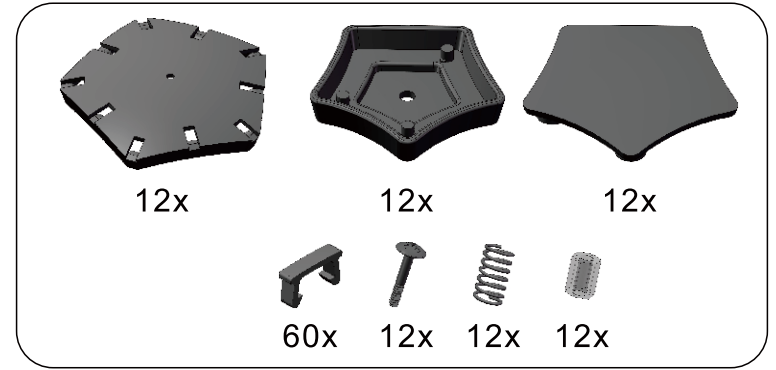
700+ parts  
20 axes



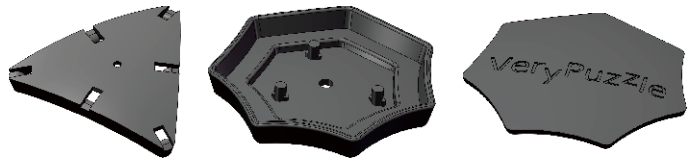
1



2



3



12x

12x

12x



72x

12x

12x

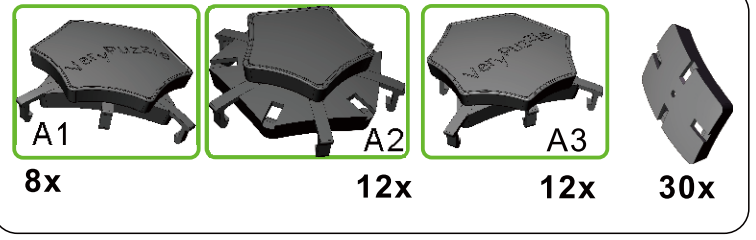
12x



A3

12x

4



A1

8x

A2

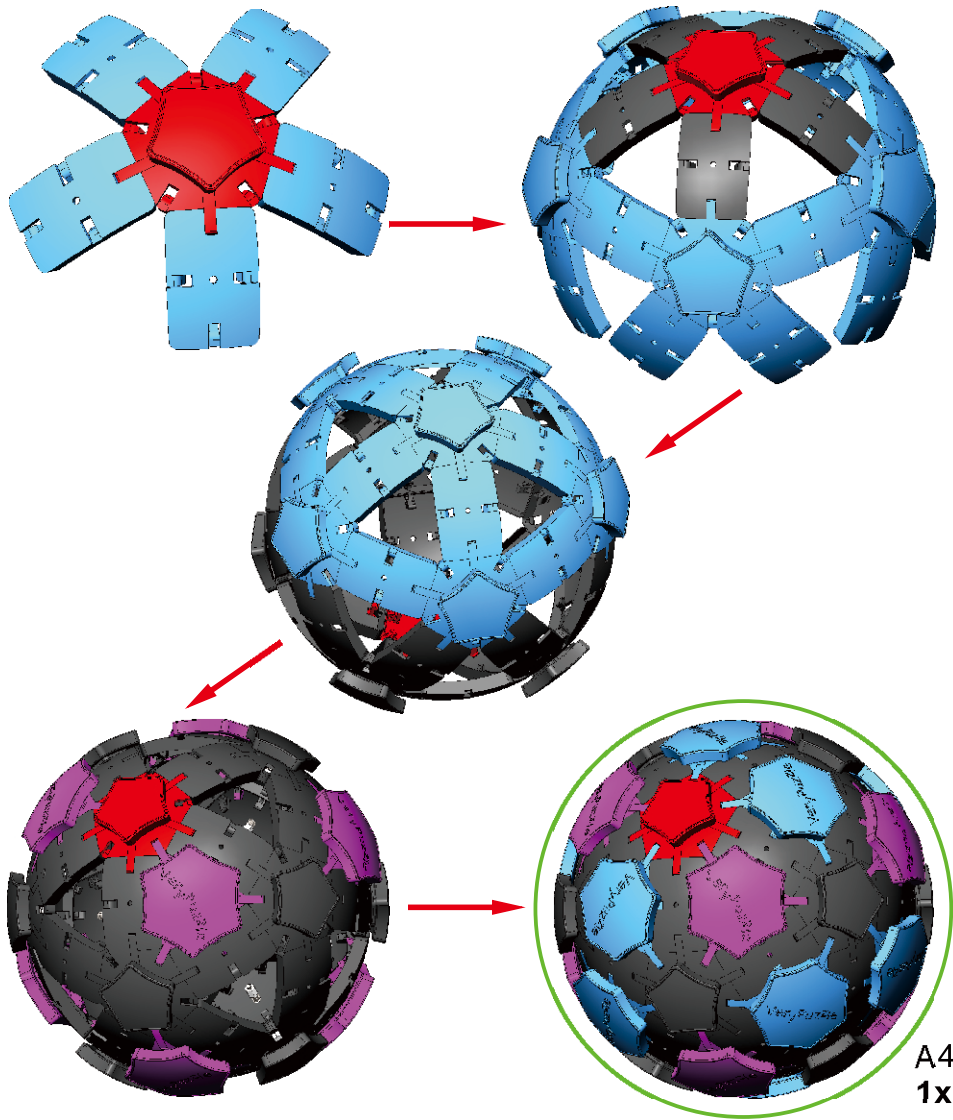
12x

A3

12x

A4

30x



A4

1x



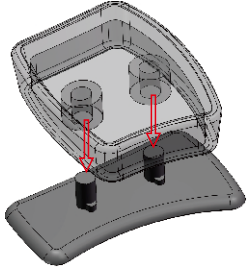
5



24x

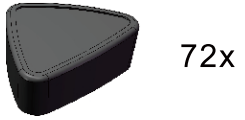


24x

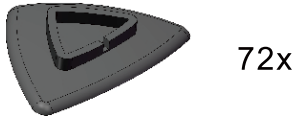


A5  
24x

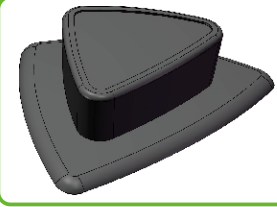
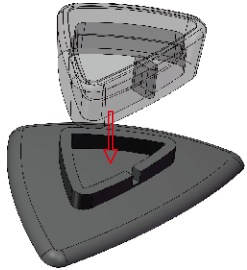
6



72x

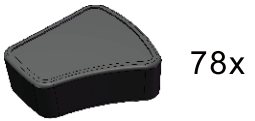


72x



A6  
72x

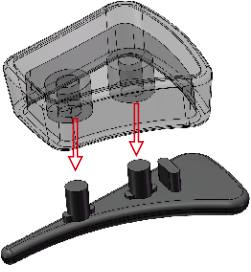
7



78x

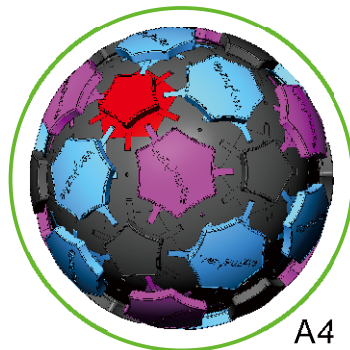


78x



A7  
78x

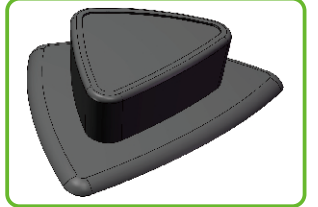
8



A4  
1x



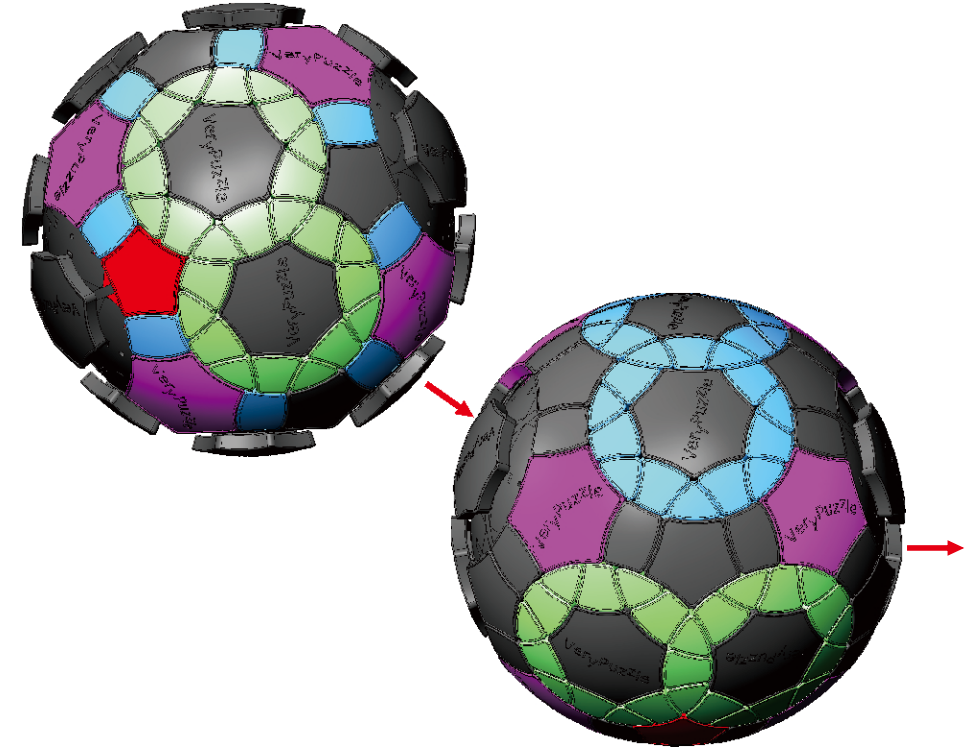
A5  
24x



A6  
72x

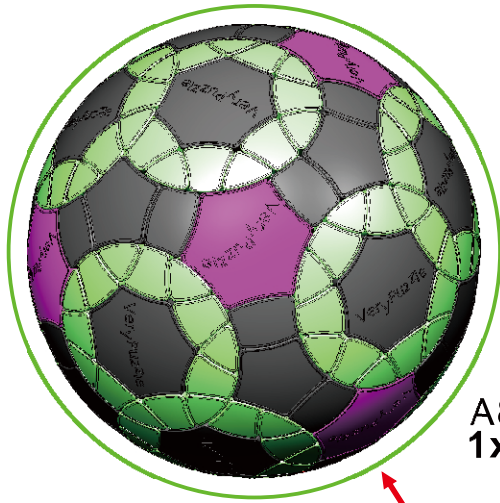


A7  
78x

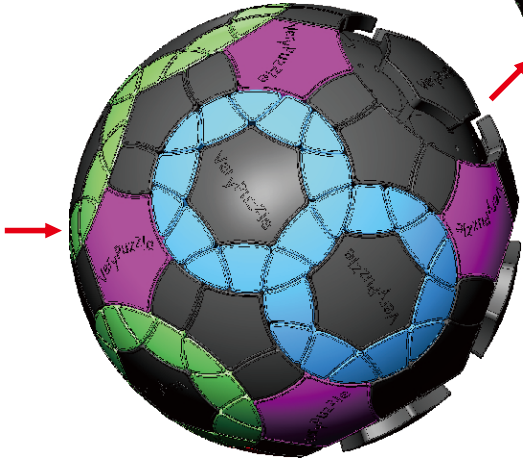
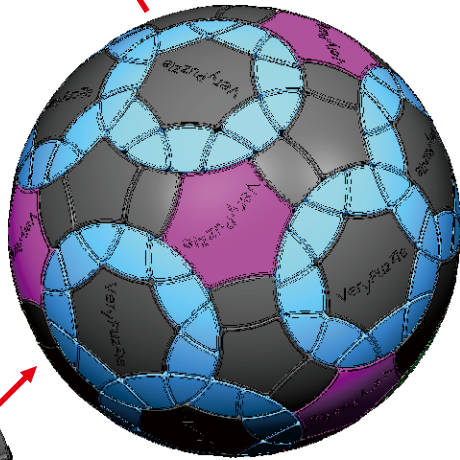




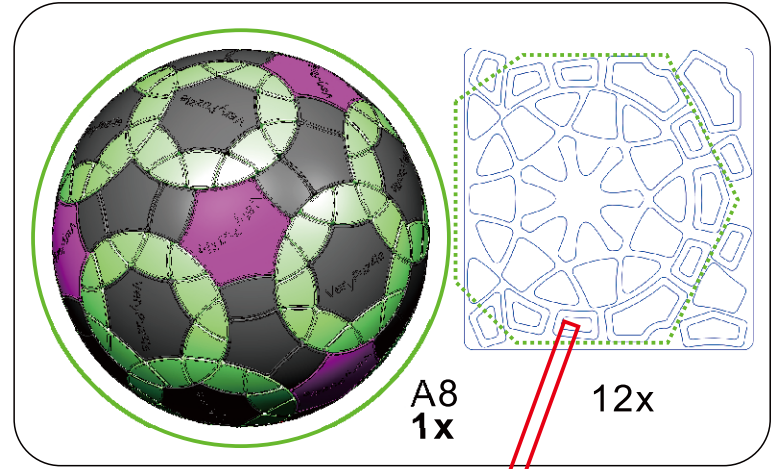
8



A8  
1x



9



A8  
1x

12x



10

## Rotation Rules

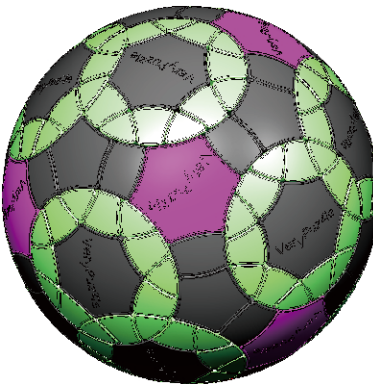
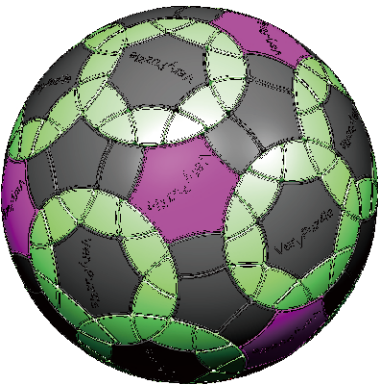


7-fold symmetry  
Turns  $51.4 \cdot n$  degrees



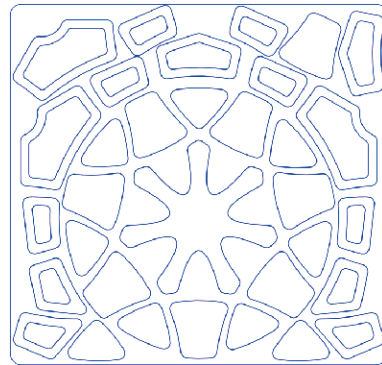
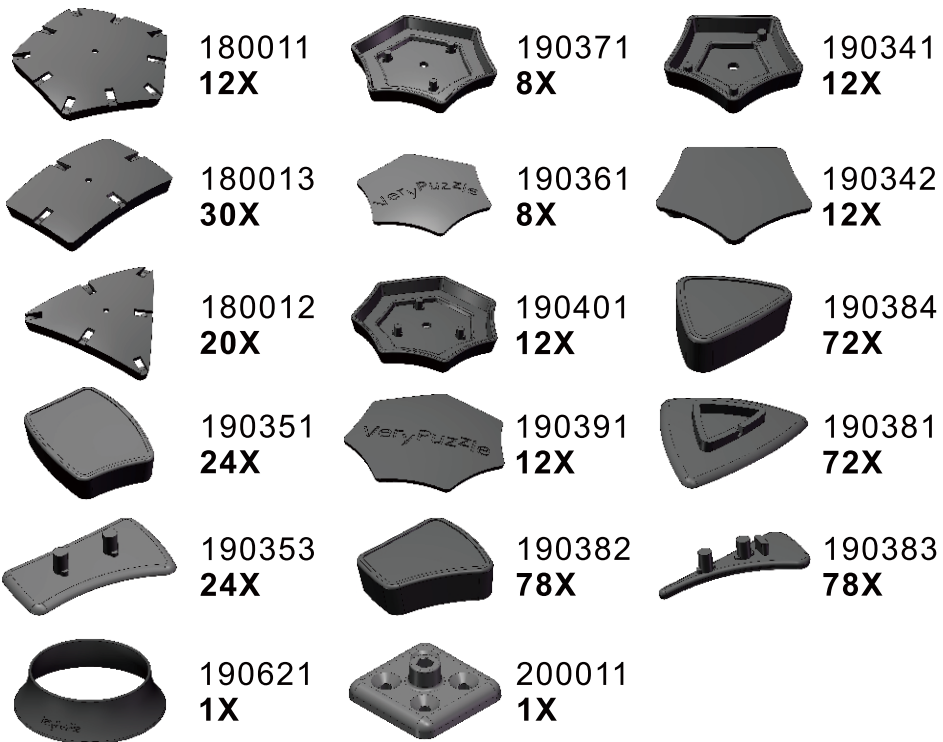
3-fold symmetry  
Turns  $120 \cdot n$  degrees

## Notations and Algorithms



## Product Information Card

<b>Product Name</b>	Icosahedron 77
<b>Model NO.</b>	#68
<b>Design</b>	VeryPuzzle Co., Ltd(HK)
<b>Manufacturer</b>	VeryPuzzle Co., Ltd(HK)
<b>Year of release</b>	2019
<b>Maximum diameter</b>	145 mm
<b>Visible moving parts</b>	202 pcs
<b>Assembly challenge</b>	★★★★☆☆☆☆
<b>Solving challenge</b>	★★★★☆☆☆☆
<b>Stickers strategy</b>	Voronoi, simplified
<b>Sticker material</b>	Uniform
<b>Color scheme</b>	12 colors
<b>Sticker protection</b>	Yes
<b>Number of stickers</b>	270 pcs
<b>Axis &amp; Symmetry</b>	$I \setminus O(C7) + I \cap O(C3)$
<b>In-core spring</b>	Yes
<b>Adjustable tension</b>	No
<b>Technical Name</b>	I3-C1
<b>Topological Print</b>	D24I27
<b>Core specification</b>	DIRT130



12X

## Customer Service

1. [support@verypuzzle.com](mailto:support@verypuzzle.com)



# VeryPuzzle