

World Robot Olympiad 2024

RoboMission – Elementary

2024WRO机器人任务赛小学组

Additional Challenge “Eggs” for the International Final

October 8th 2024

国际赛新增任务-鸡蛋

It is not necessary to solve this extra challenge to participate in the International Final!
 参加国际赛的队伍可自行决定是否完成此任务

Our chicken on the game field got two new eggs. Those eggs are placed on the two grey circles next to one yellow fence and next to the yellow/red vegetables on top of the game field and should be brought to the egg vending machine. Full points are awarded if the eggs are completely underneath the vending machine in the top-left corner of the game field.

场地上增加两个鸡蛋。分别放在一个黄色栅栏旁边的灰色圆圈上和场地上方黄色/红色蔬菜旁边的灰色圆圈上，机器人需要把鸡蛋带到场地左上角的鸡蛋售卖机处。如果鸡蛋完全在鸡蛋售卖机的下面，可以获得满分。

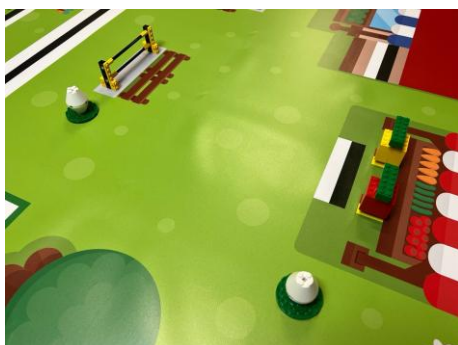


Eggs鸡蛋

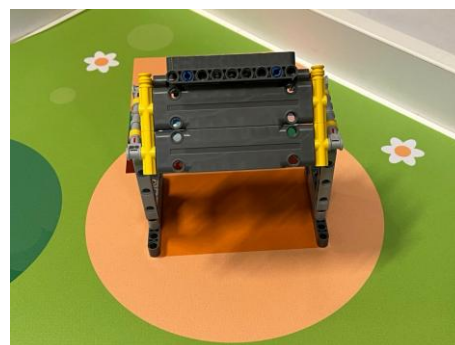


Vending machine

售卖机Update (8th of
 October): Will be fixed
 on the mat. 固定在场地
 上



Placement of eggs
 鸡蛋的摆放位置







Placement of vending machine
 售卖机的摆放位置

Additional scoring lines will be added to the scoring sheet:
 计分表相应增加鸡蛋任务的计分：

Eggs 鸡蛋		
Egg is touching the dark orange area inside the vending machine 鸡蛋接触到售卖机里面深橘色区域时， 每个7分	7	14
Egg is only touching the light orange area around the machine 鸡蛋只接触到售卖机周围的浅橘色区域时， 每个3分	3	
New maximum score 新总分		156

Scoring Interpretation 计分解释

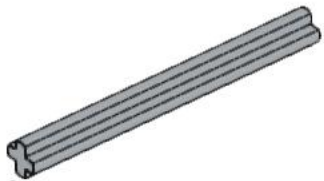
 <p>3 points (touching light orange area) 3分 (接触浅橘色区域)</p>	 <p>7 points (touching dark orange area) 7分 (接触深橘色区域)</p>
 <p>10 points (one touching light one touching dark orange area) 10分 (1个鸡蛋接触浅橘色, 1个鸡蛋接触深橘色)</p>	 <p>14 points (both eggs touching dark orange area) 14分 (2个鸡蛋均接触深橘色)</p>

New Full Scoring Sheet 新计分表

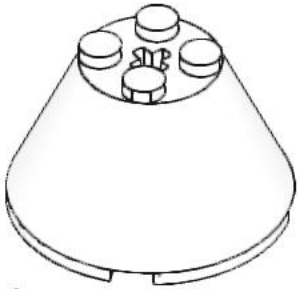
Team name: _____

Round: _____

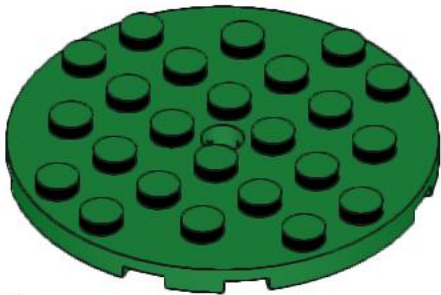
Tasks	Each	Max.	#	Total
Collect ripe and rotten vegetables 收集成熟的蔬菜和腐烂的蔬菜				
Red vegetable completely in market area红色蔬菜完全进入红色市场区域	11	44		
Red vegetable partly in the market area红色蔬菜部分进入红色市场区域	4			
Yellow vegetable completely in the compost area黄色蔬菜完全进入棕色堆肥区域	11	44		
Yellow vegetable partly in the compost area黄色蔬菜部分进入棕色堆肥区域	4			
Water thirsty vegetables and prepare farming 缺水的蔬菜和准备耕种				
Water element is touching the green square around a green vegetable and the green vegetable is still touching the green square as well水元素接触里面有绿色蔬菜的绿色区域，并且绿色蔬菜仍然与绿色方形区域接触(每个区域里最多只能有1个水元素得分)	10	30		
Earth block is no longer touching the green square area土元素不再接触任何绿色方形区域	3	9		
Bonus for Fences & Chicken 栅栏和鸡的加分				
Chicken is not damaged or moved鸡没有被损坏或移动		3		
Fence is not damaged or moved栅栏没有被损坏或移动	3	12		
International Final: Eggs 国际赛新任务：鸡蛋				
Egg is touching the dark orange area inside the vending machine 鸡蛋接触到售卖机里面深橘色区域时，每个7分	7	14		
Egg is only touching the light orange area around the machine 鸡蛋只接触到售卖机周围的浅橘色区域时，每个3分	3			
Maximum Score 最高分		156		
Surprise Rule 惊喜规则				
Total Score in this run 本轮得分				
Time in full seconds 本轮用时				



2x
32073
Light Bluish Gray

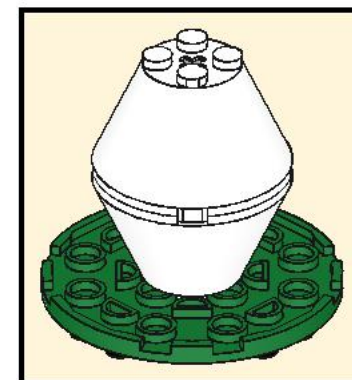
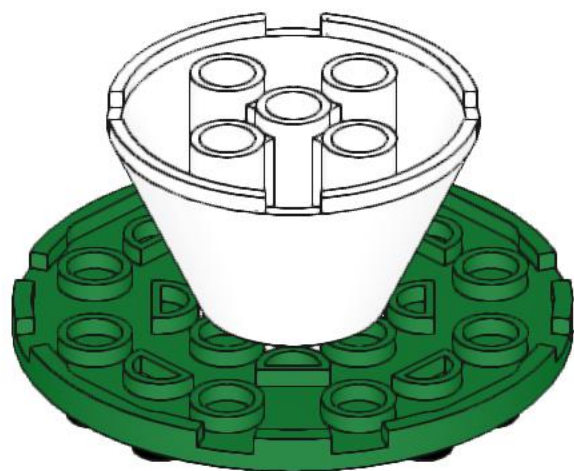
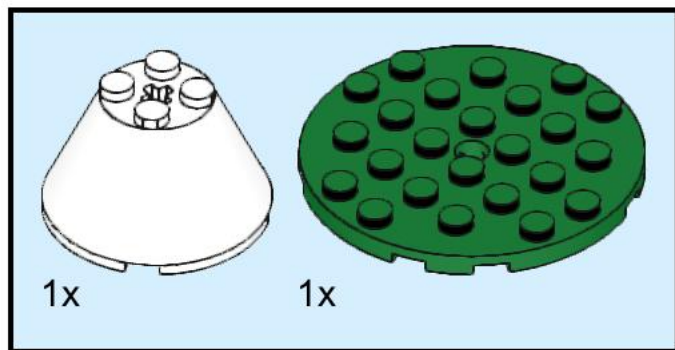


4x
3943b
White



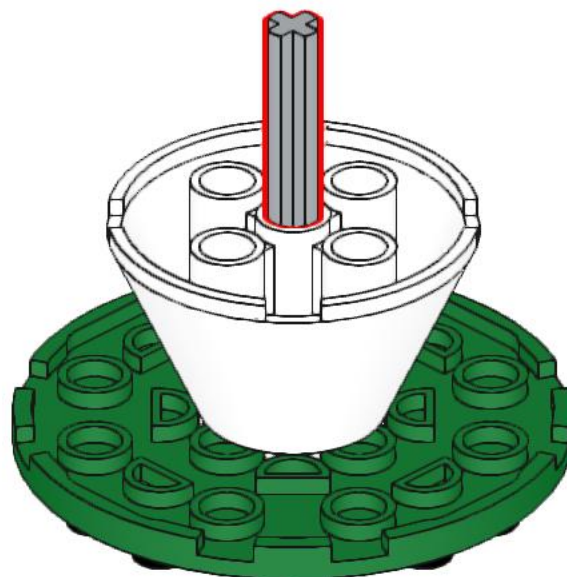
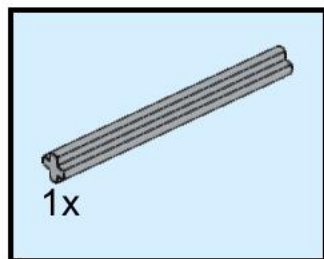
2x
11213
Green

1

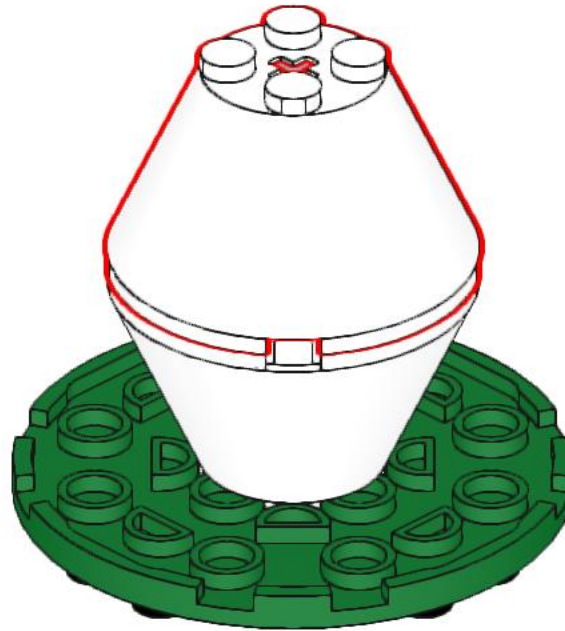
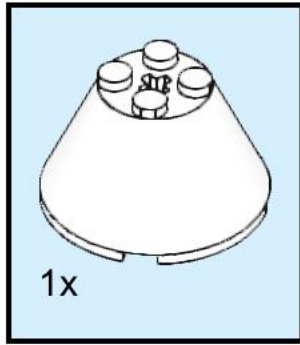


2x

2

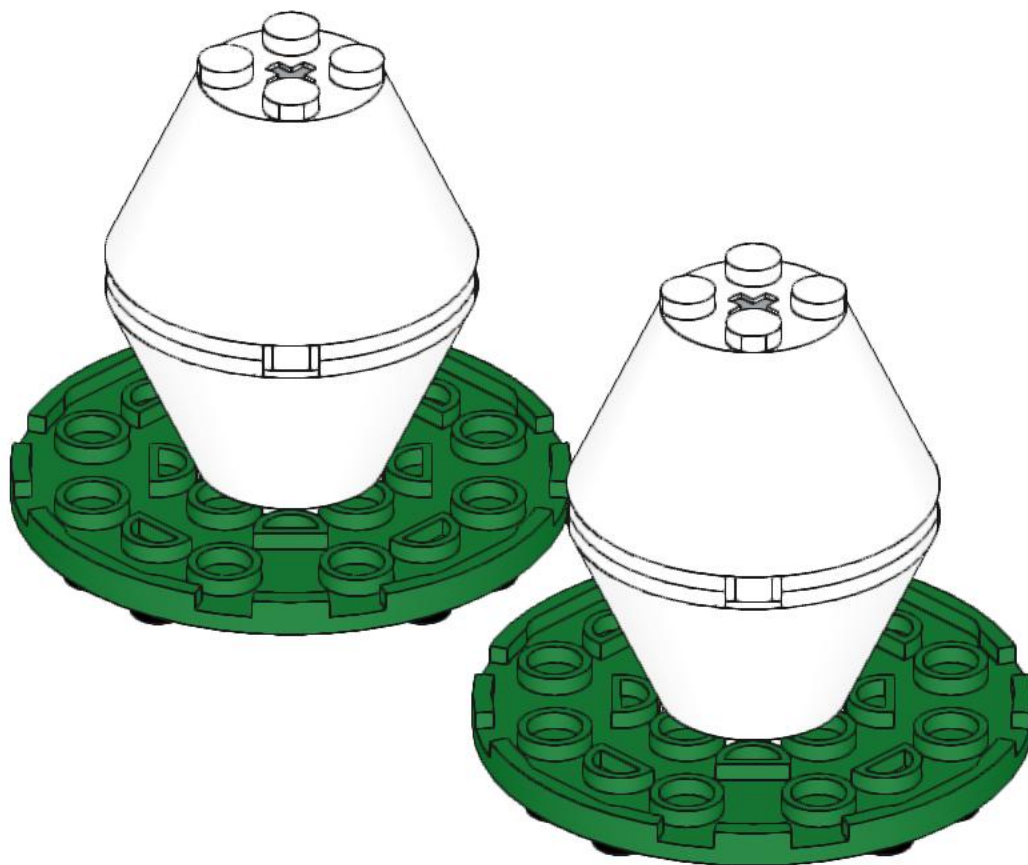


3



2x

4

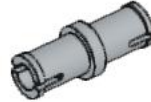




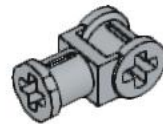
4x
18651
Black



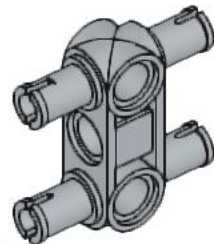
2x
3713
Light Bluish Gray



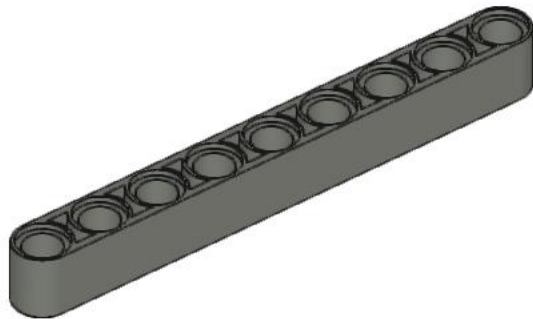
4x
3673
Light Bluish Gray



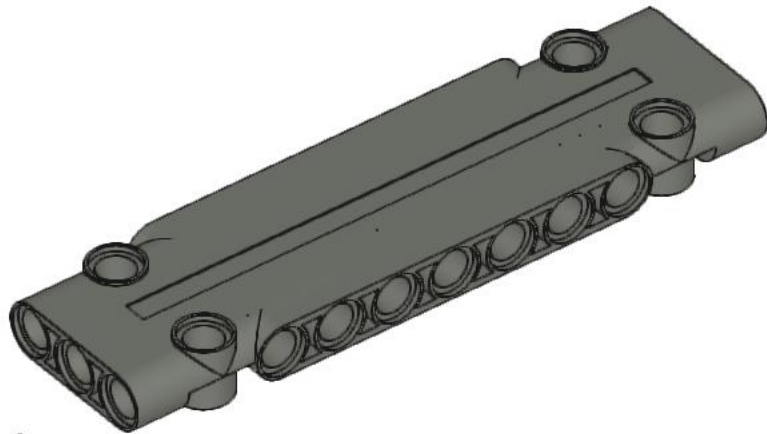
8x
32039
Light Bluish Gray



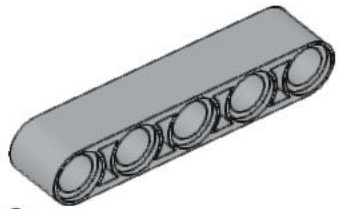
2x
48989
Light Bluish Gray



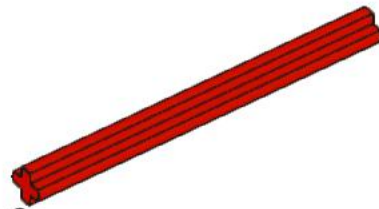
4x
40490
Dark Bluish Gray



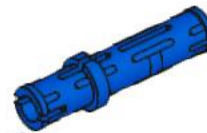
4x
15458
Dark Bluish Gray



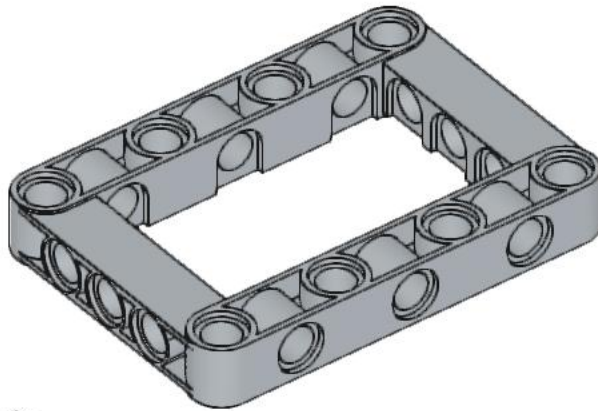
2x
32316
Light Bluish Gray



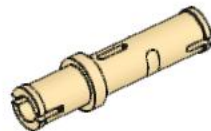
2x
3706
Red



2x
6558
Blue



2x
64179
Light Bluish Gray



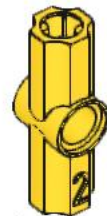
4x
32556
Tan



8x
4265c
Yellow



6x
32062
Red

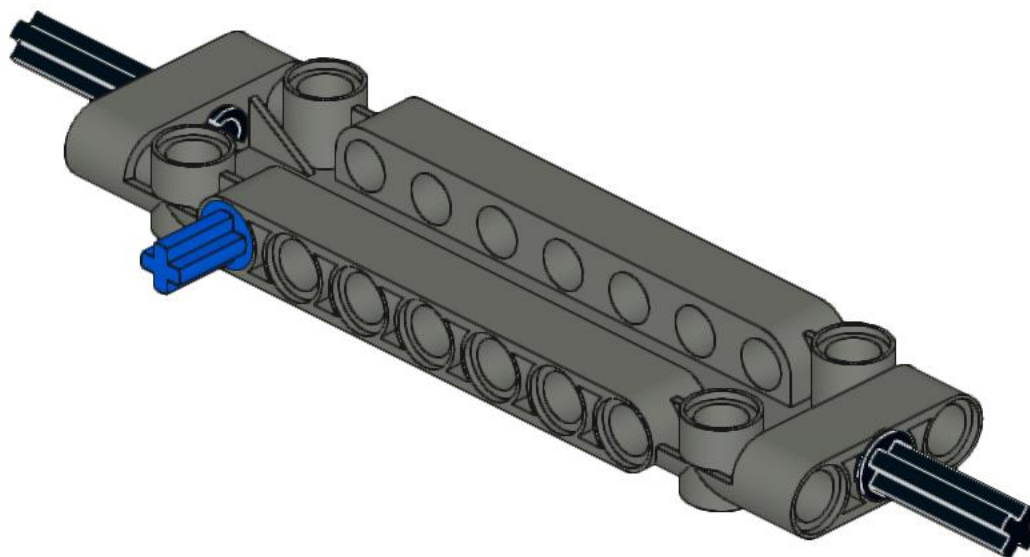
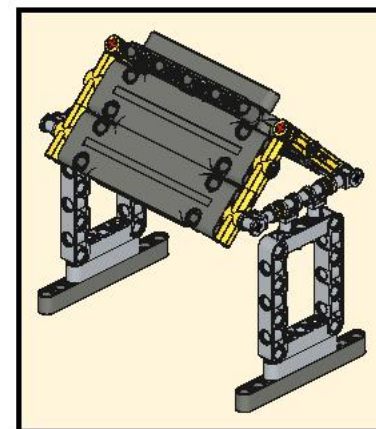
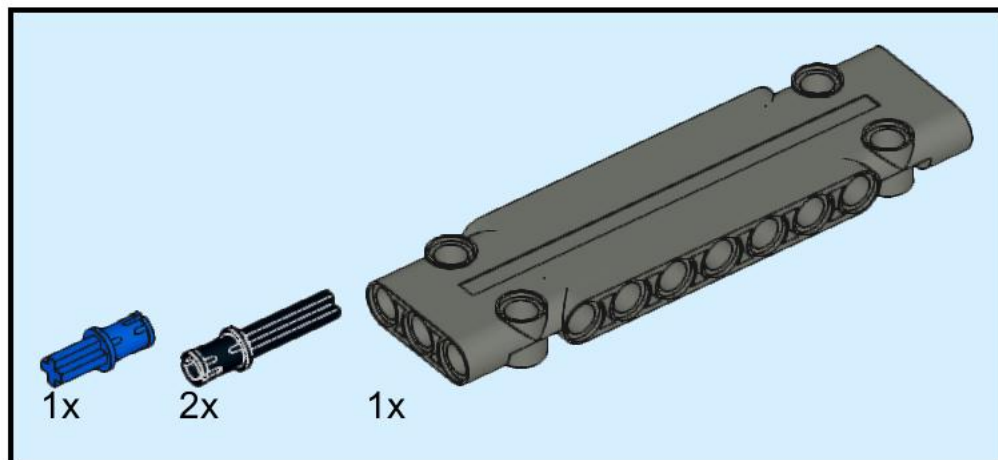


8x
32034
Yellow

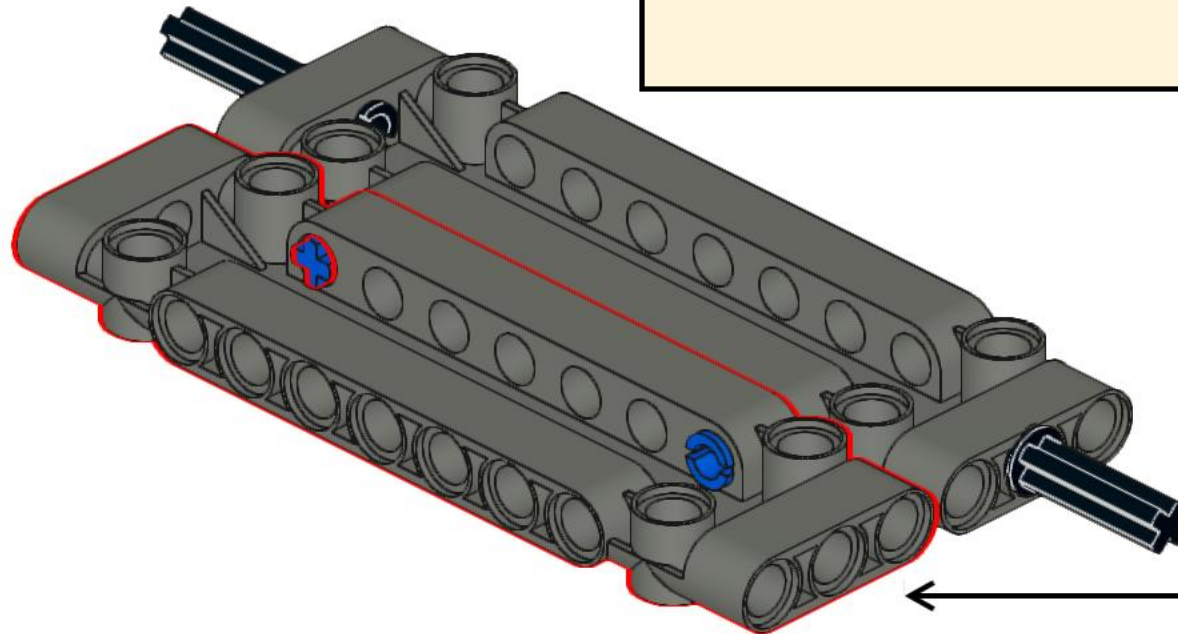
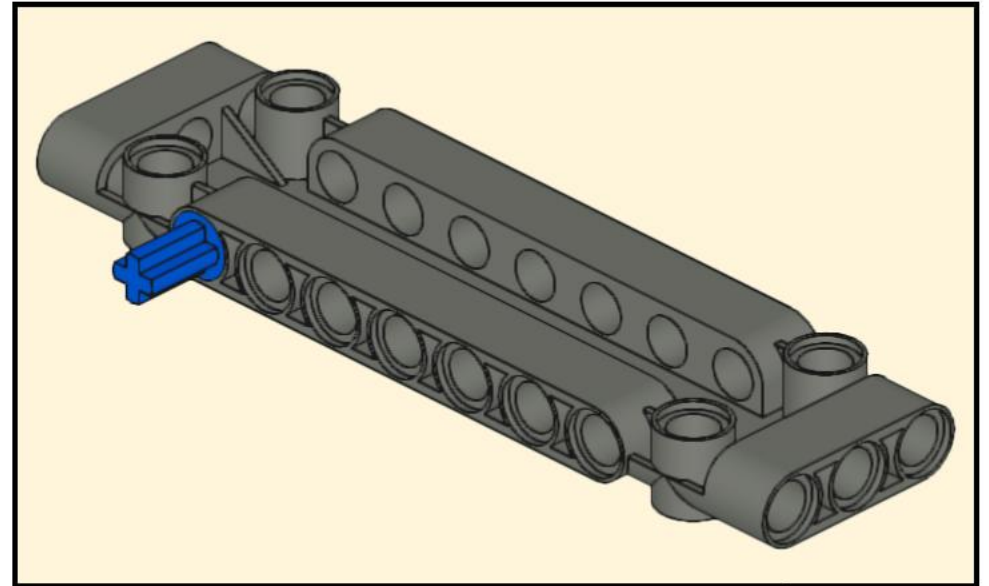
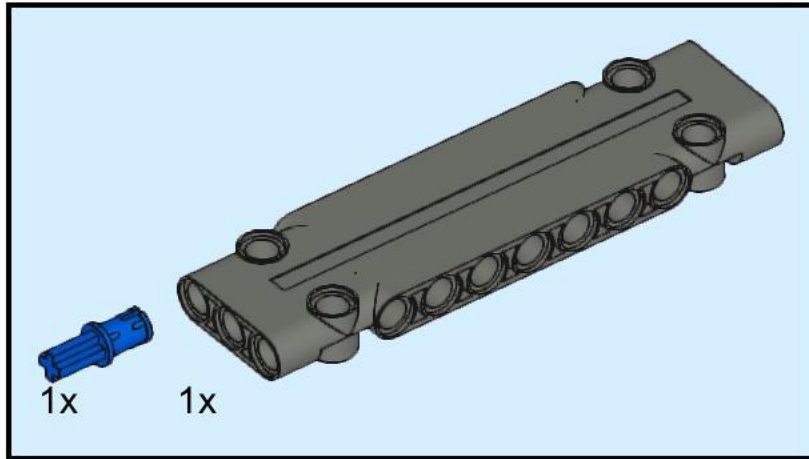


8x
43093
Blue

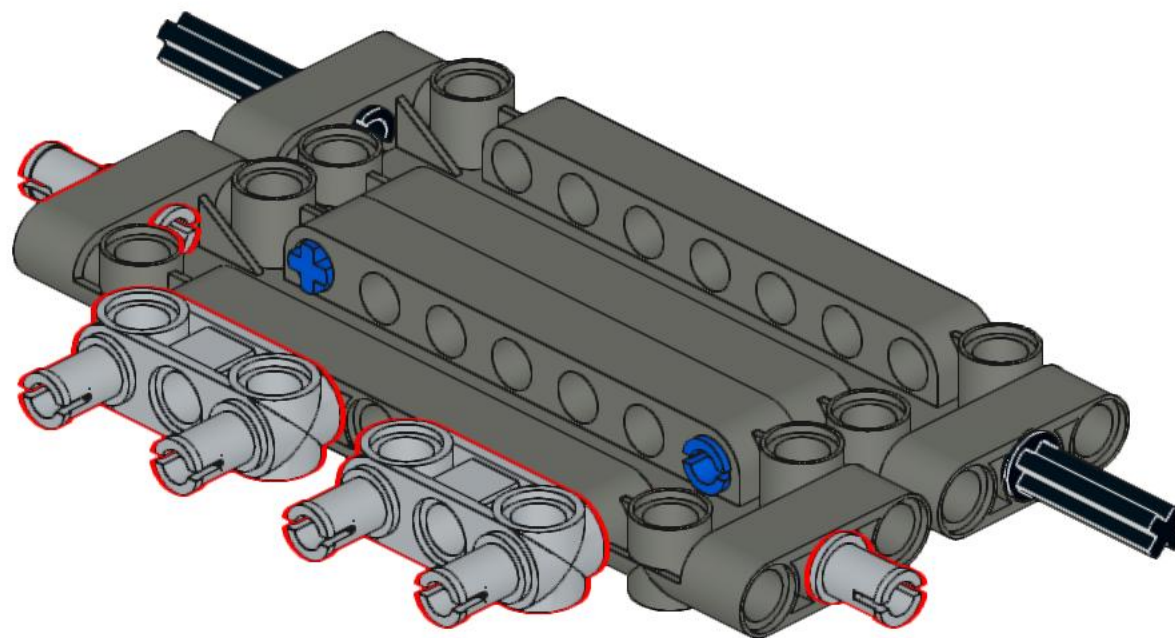
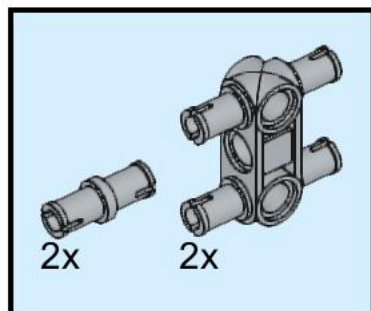
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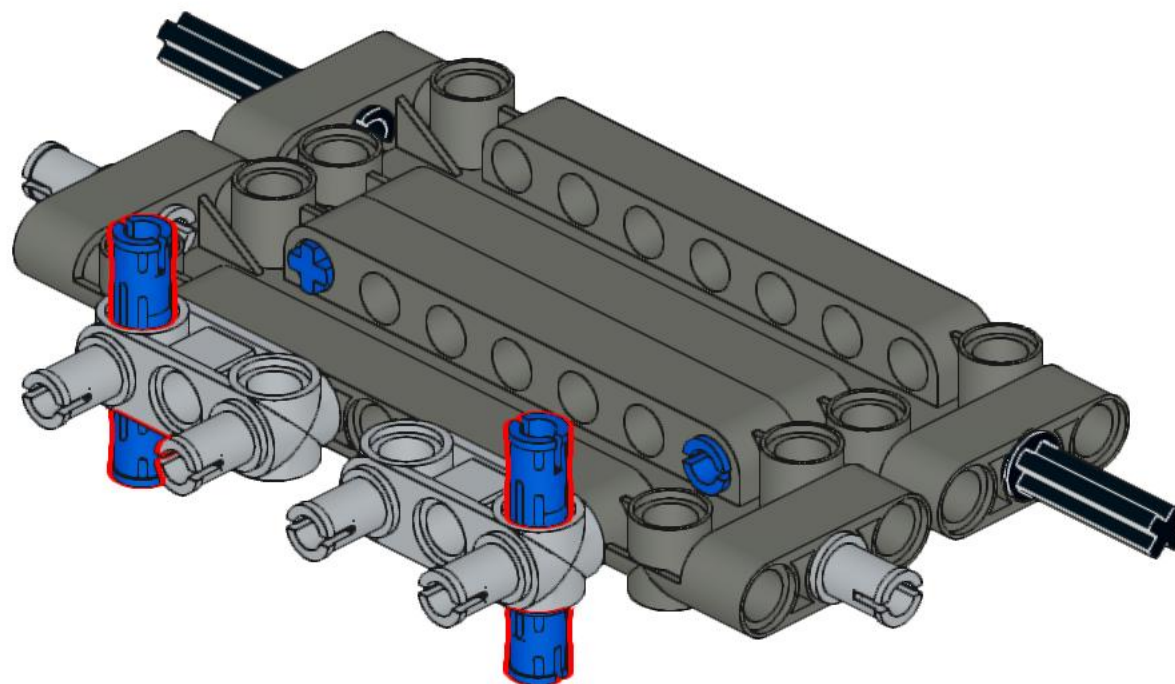
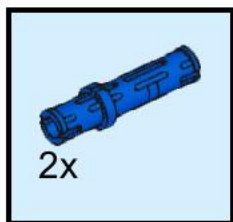
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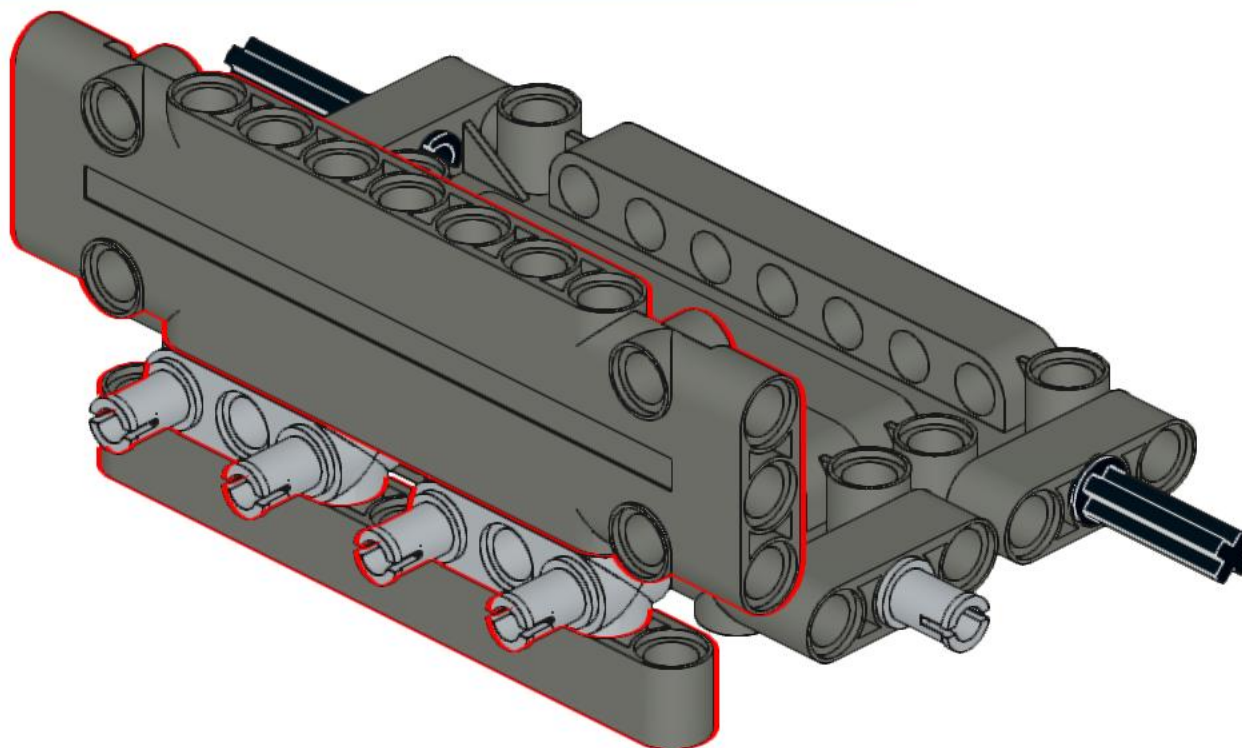
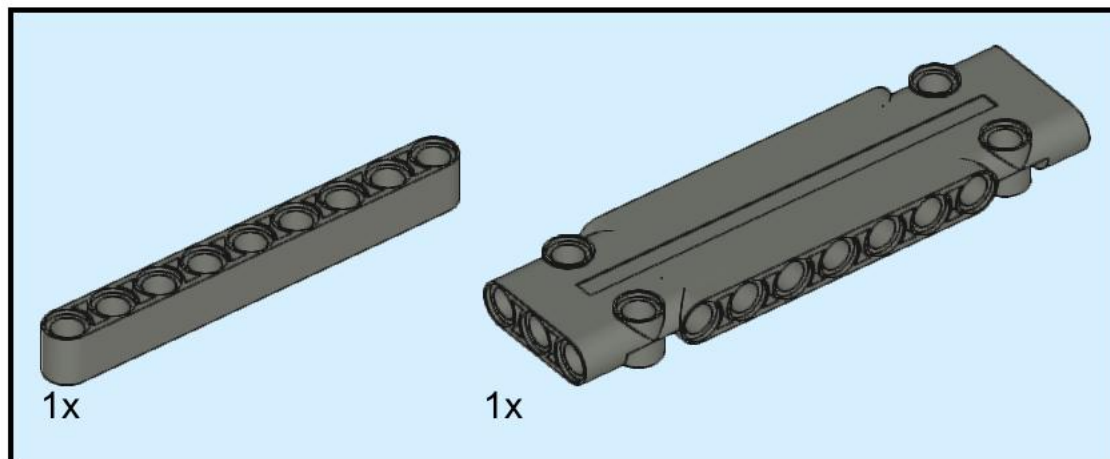
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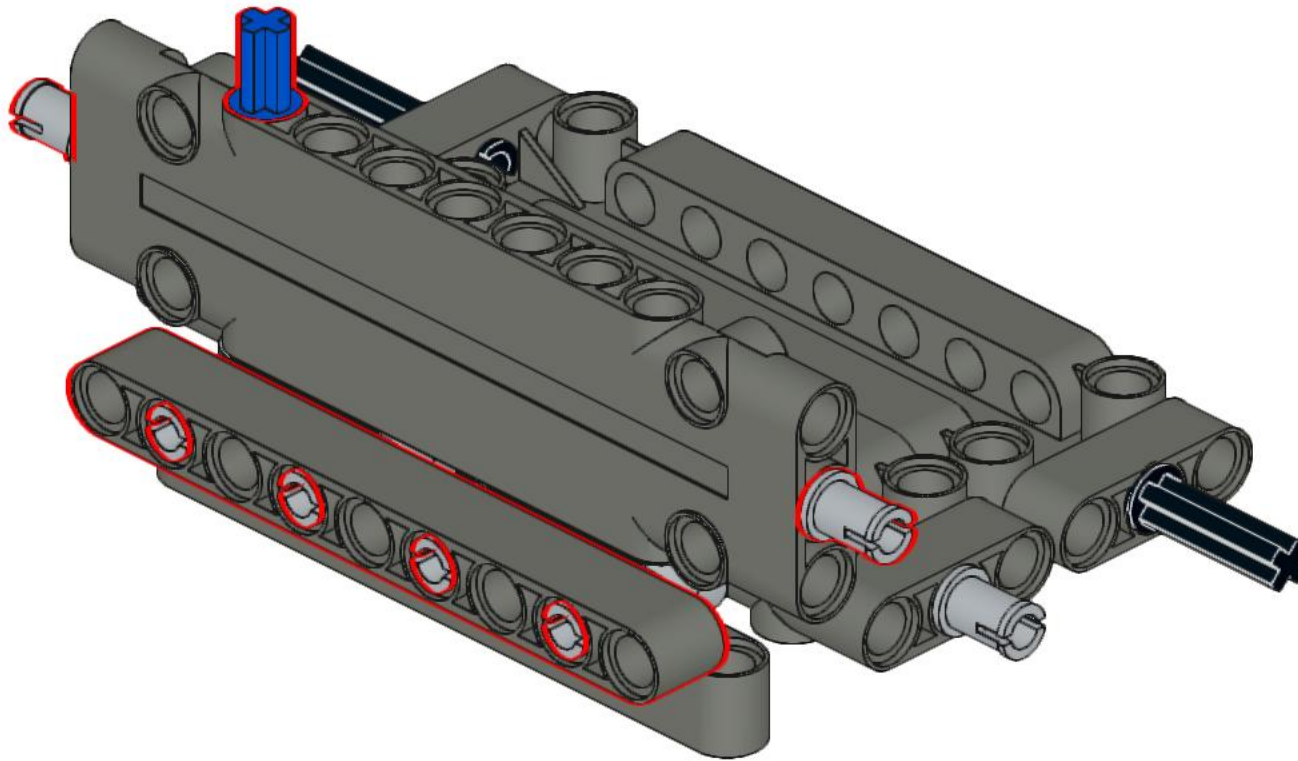
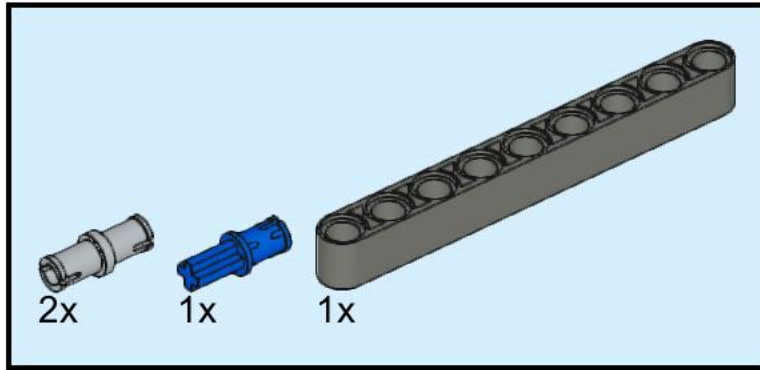
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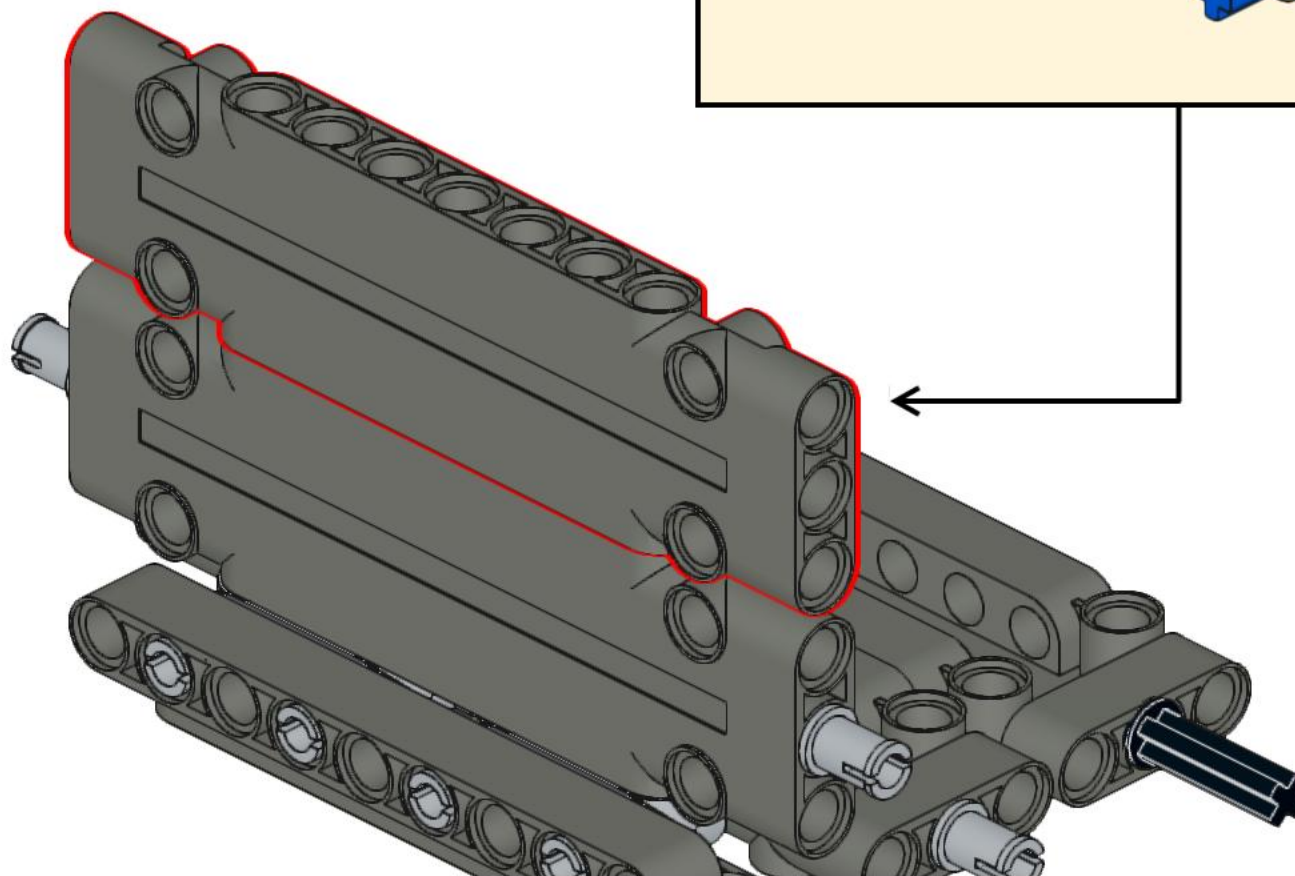
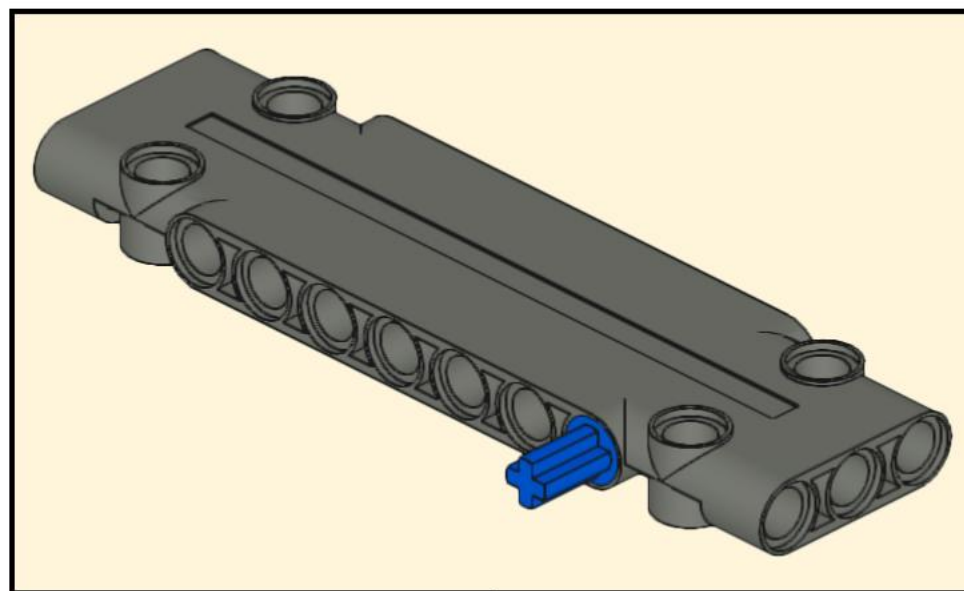
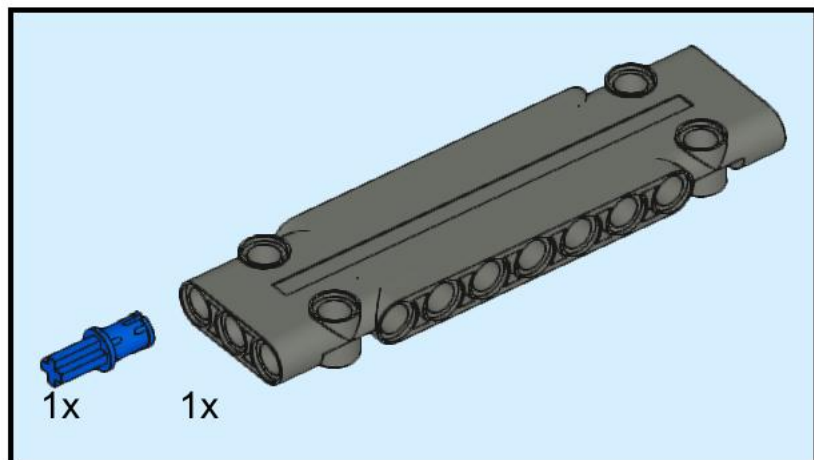
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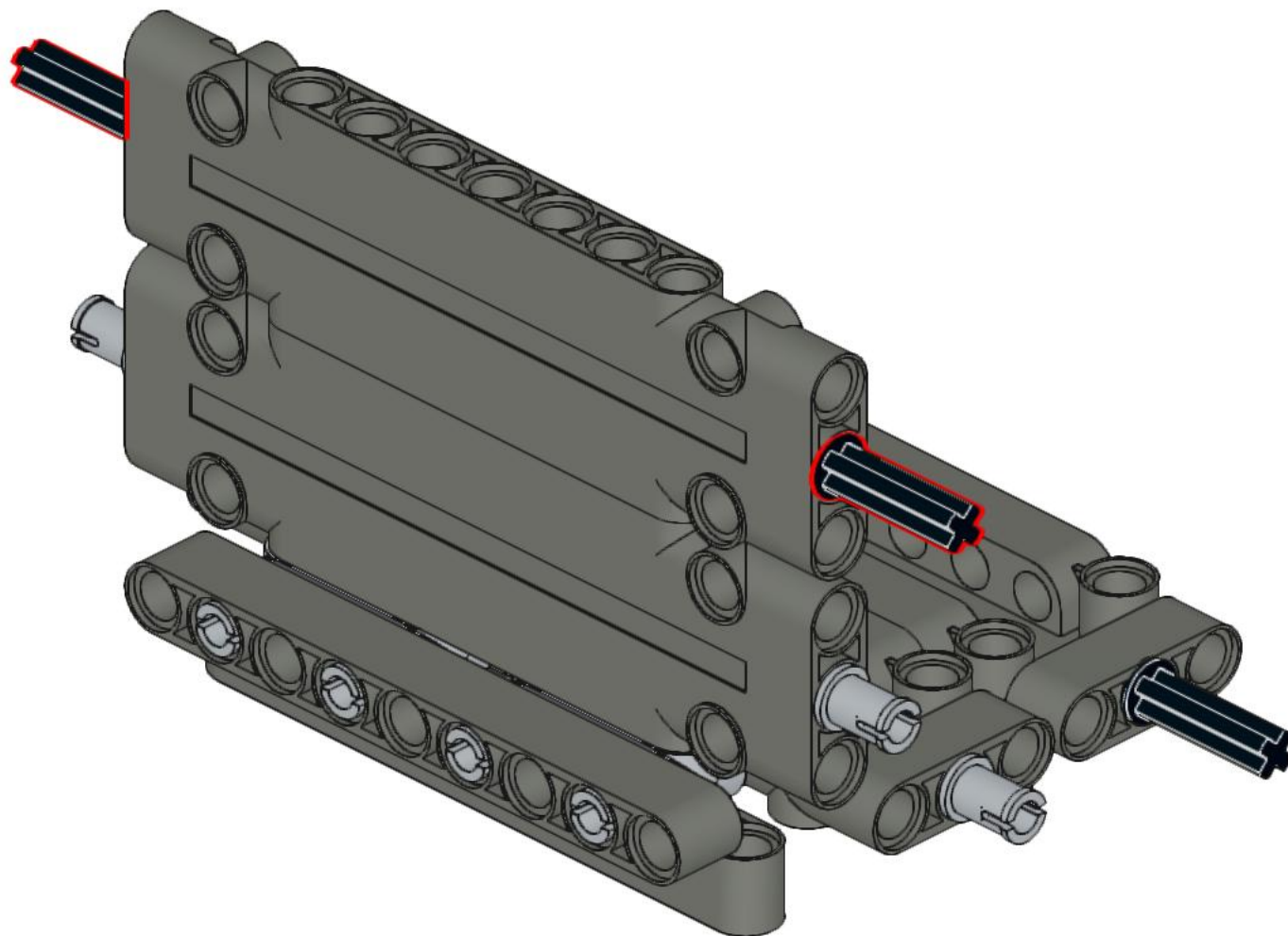
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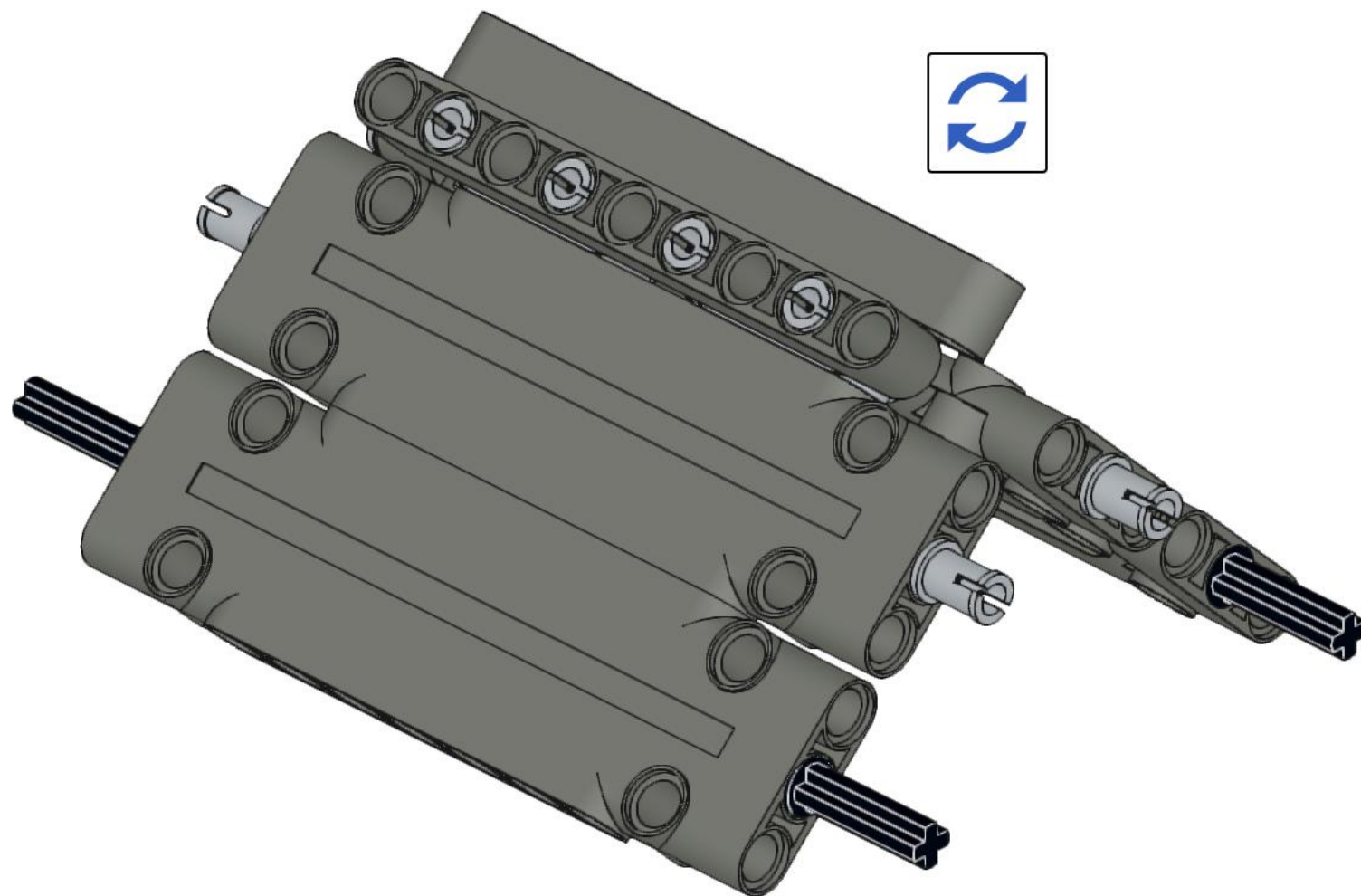
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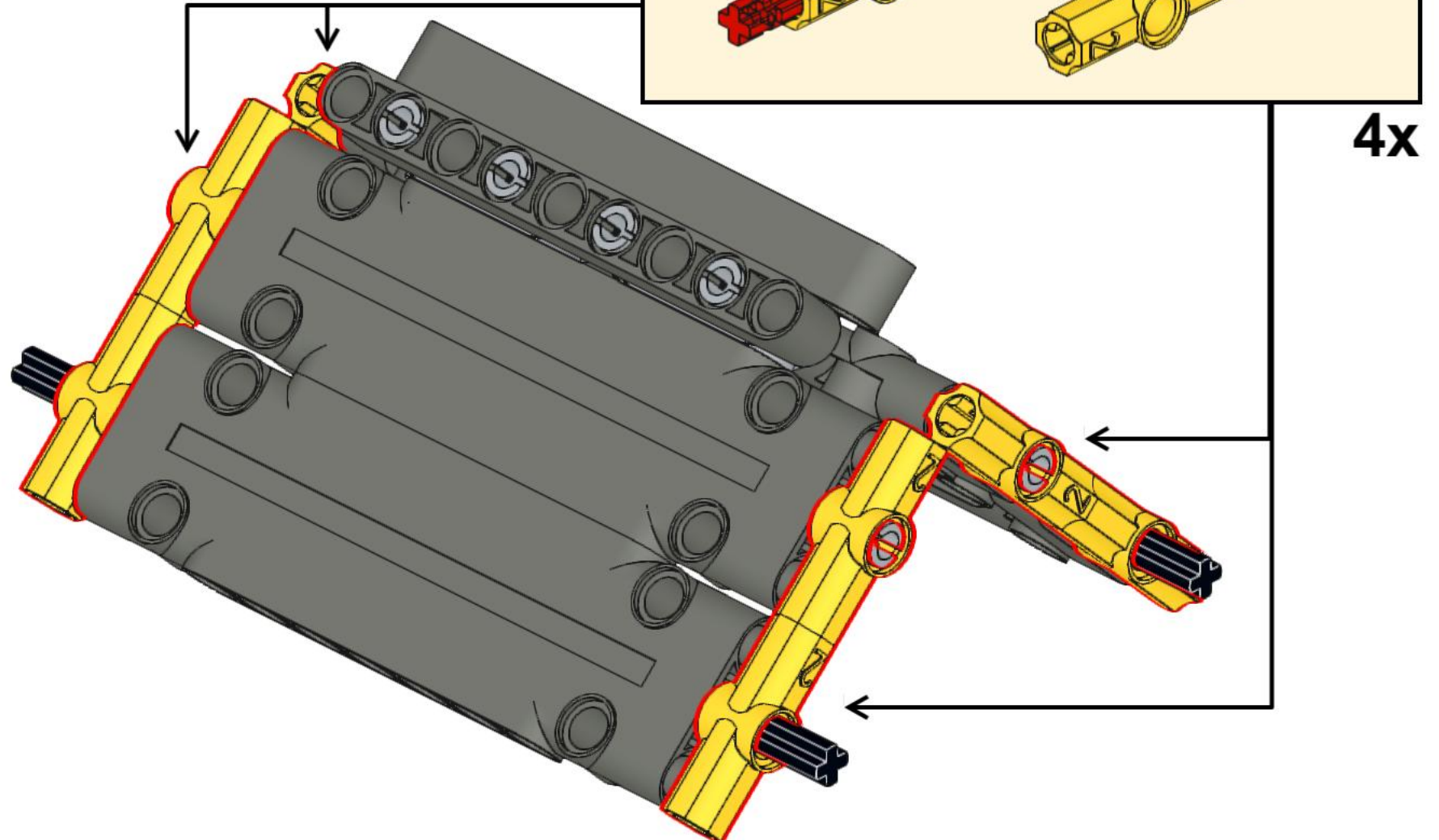
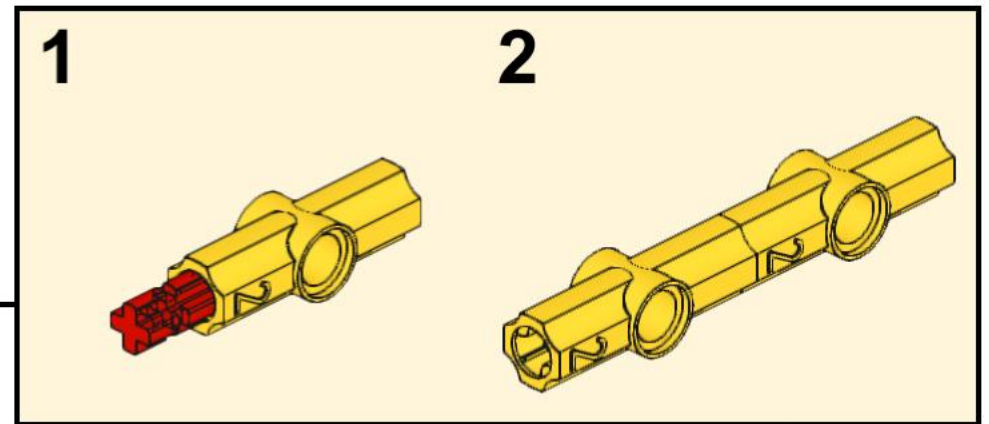
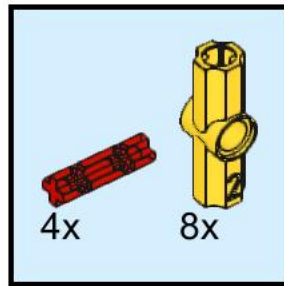
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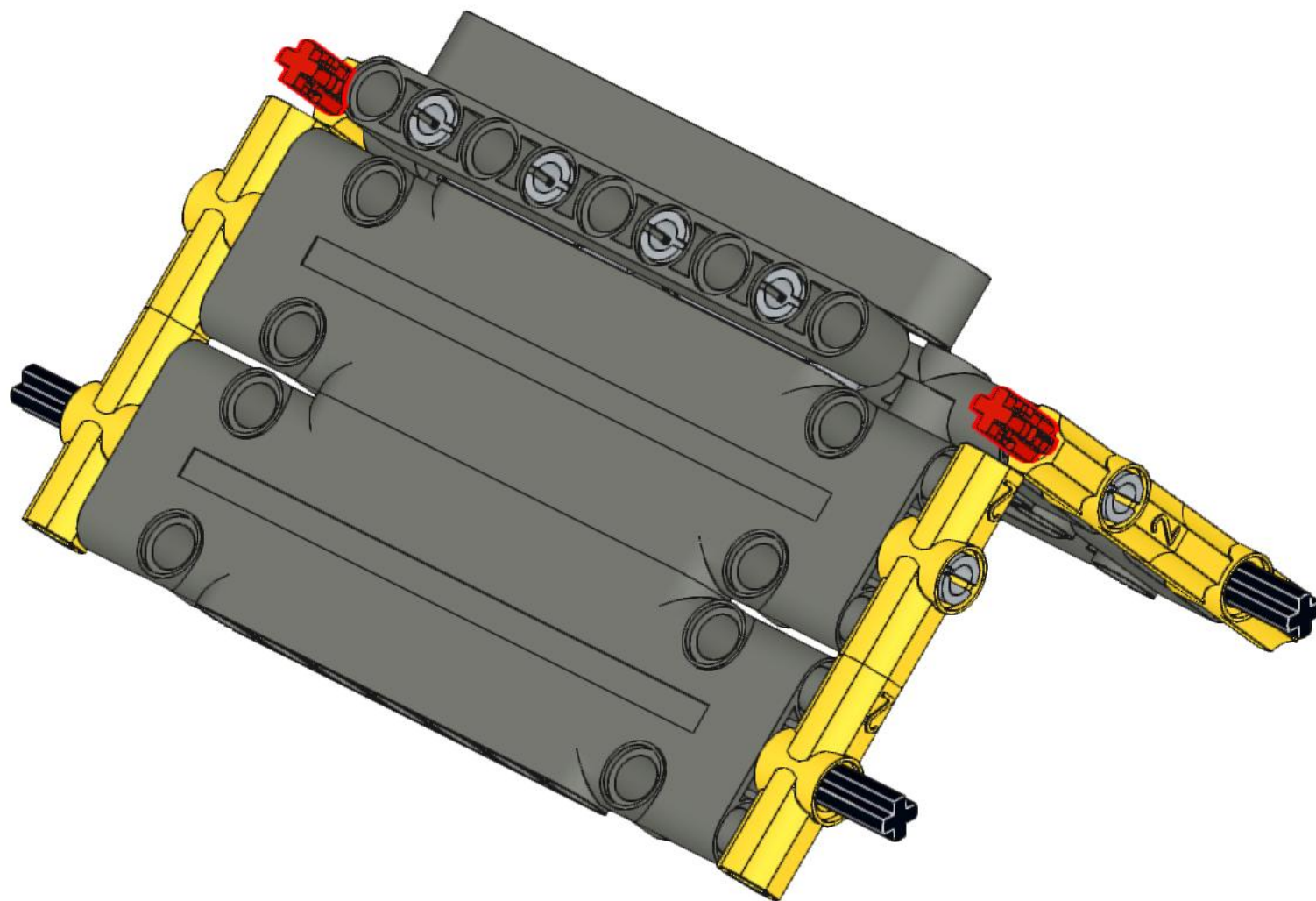
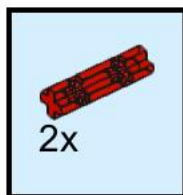
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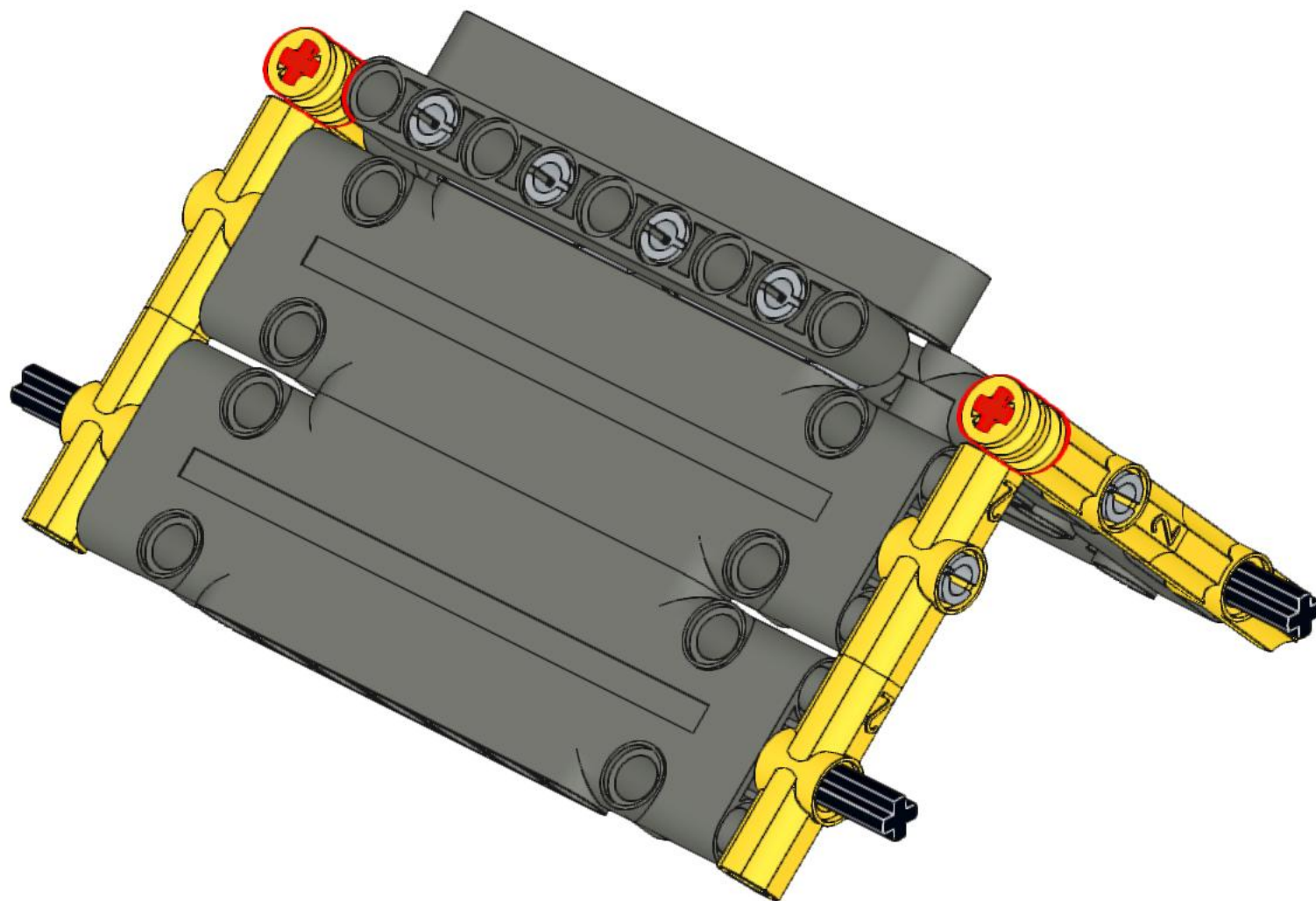
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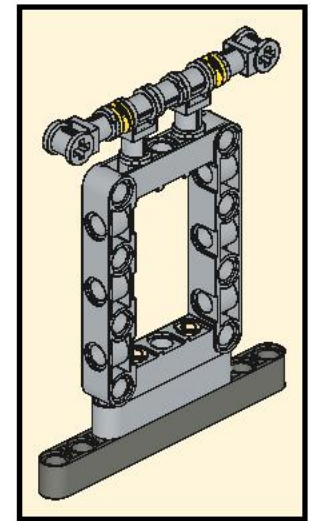
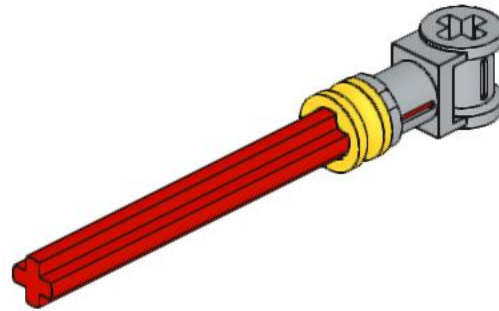
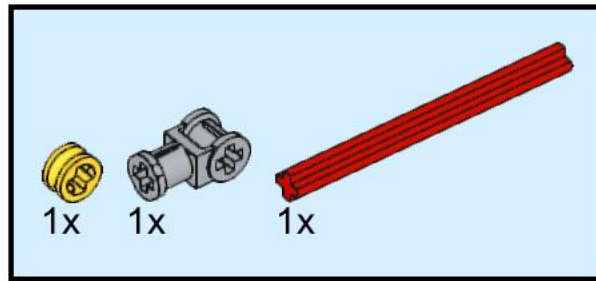
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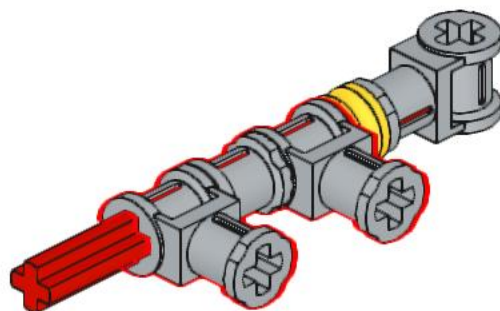
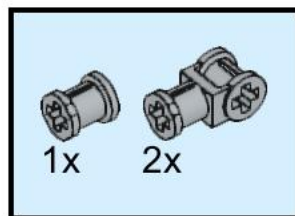


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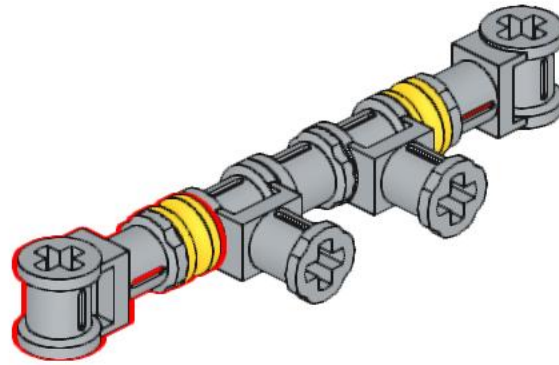
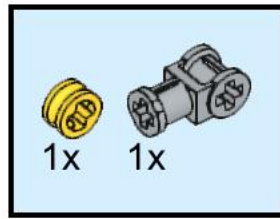


2x

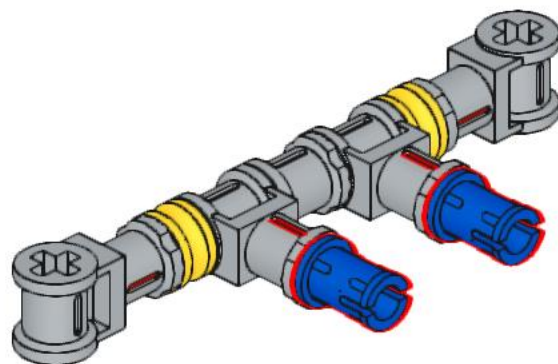
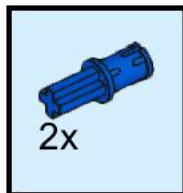
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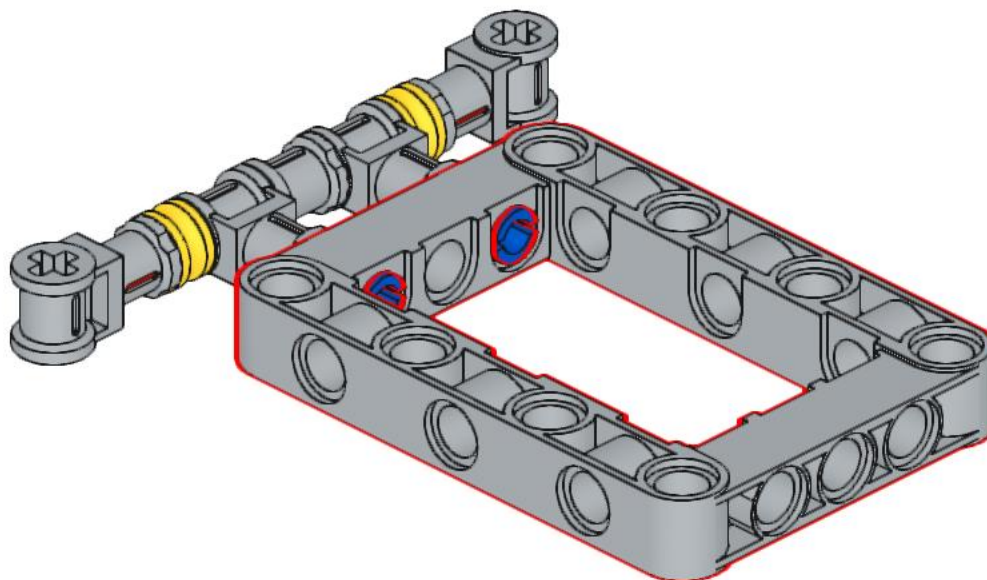
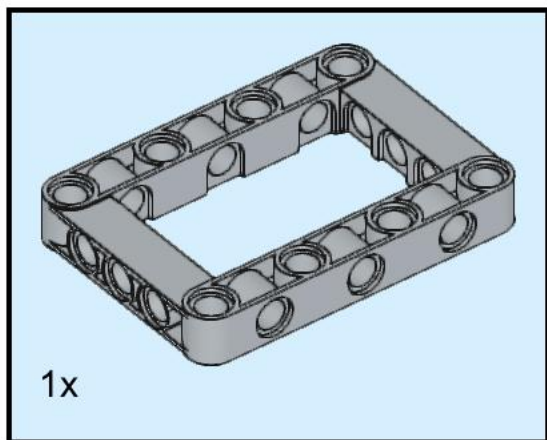
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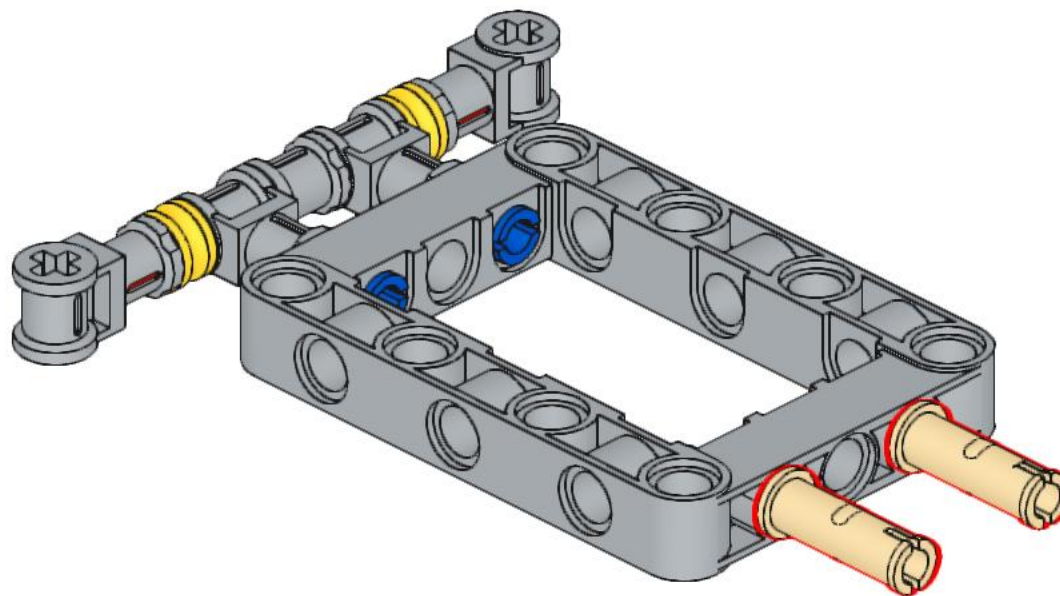
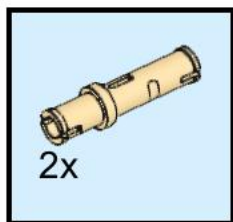
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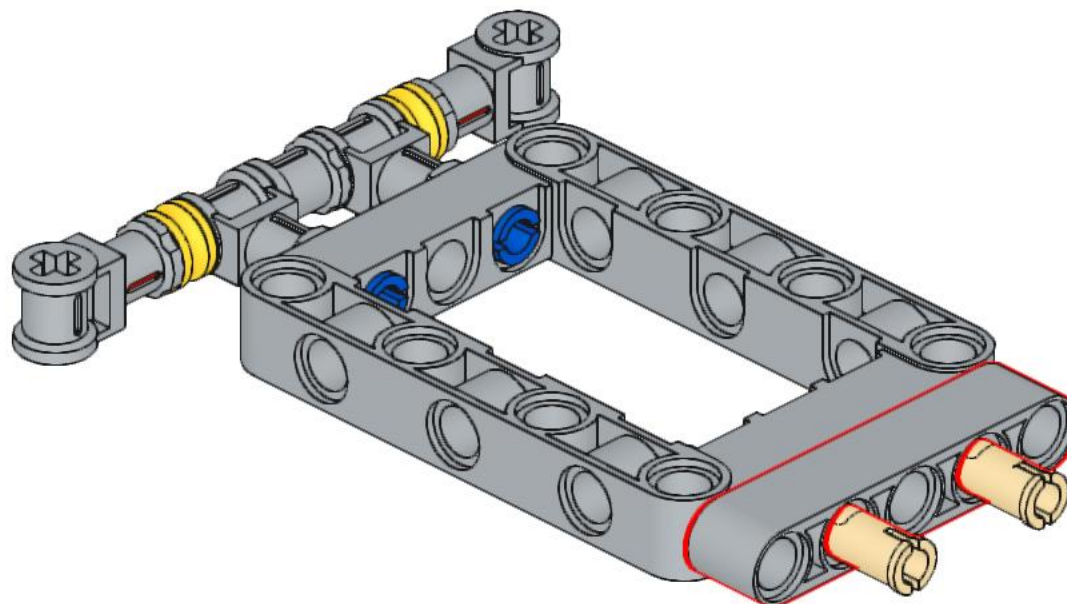
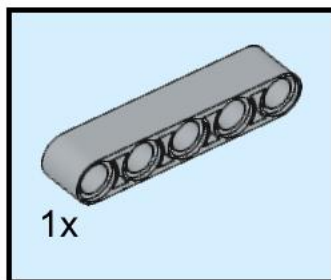
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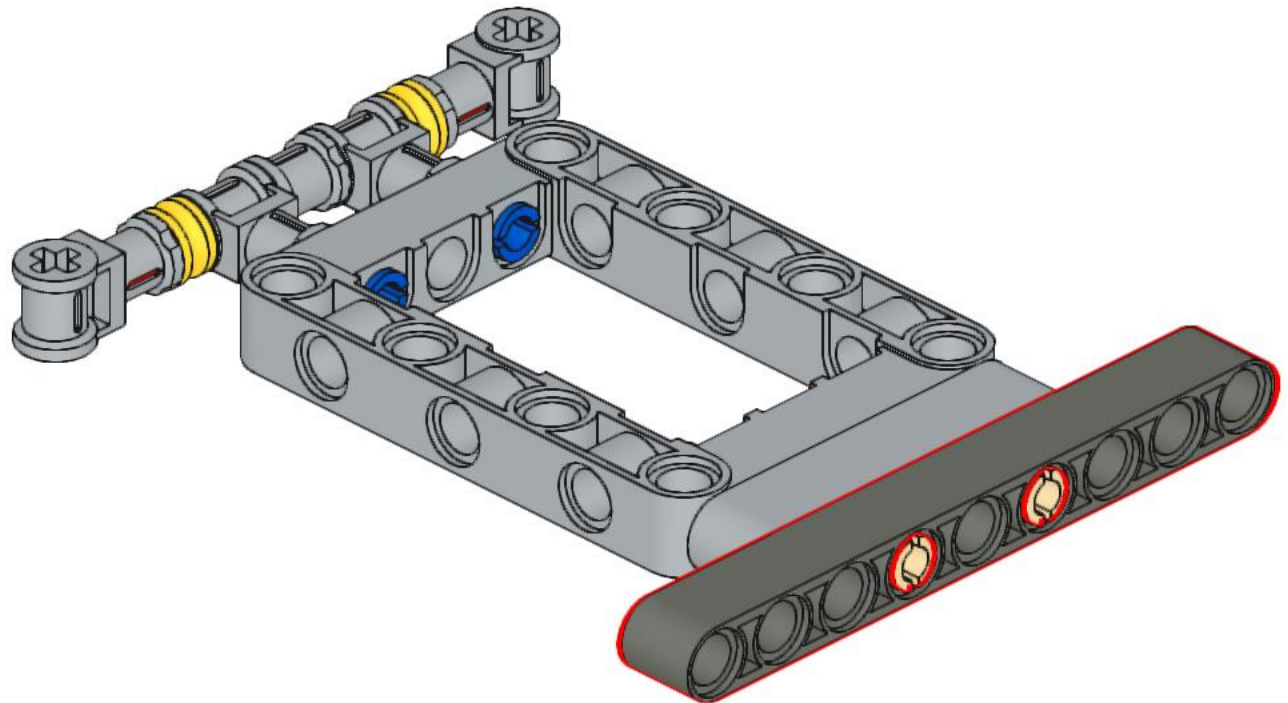
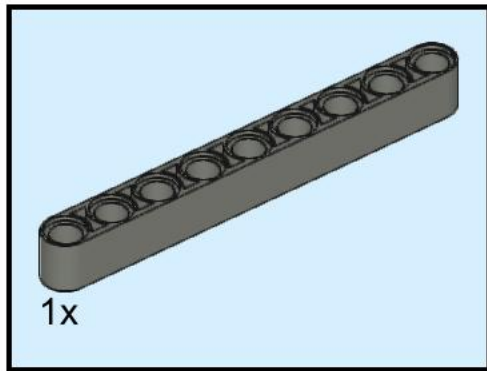
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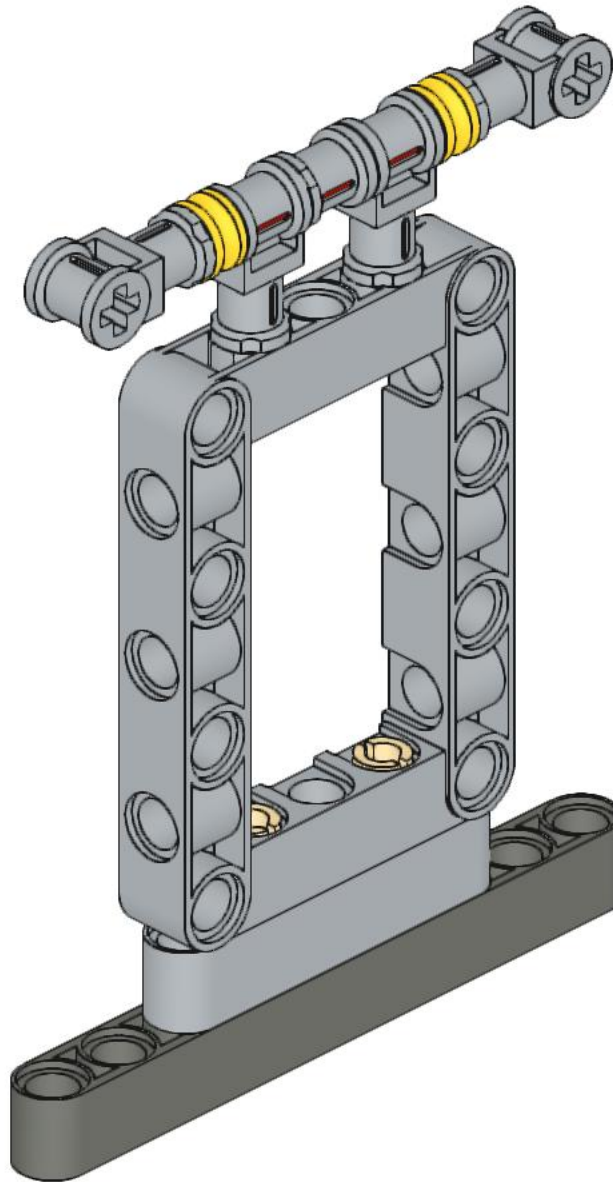
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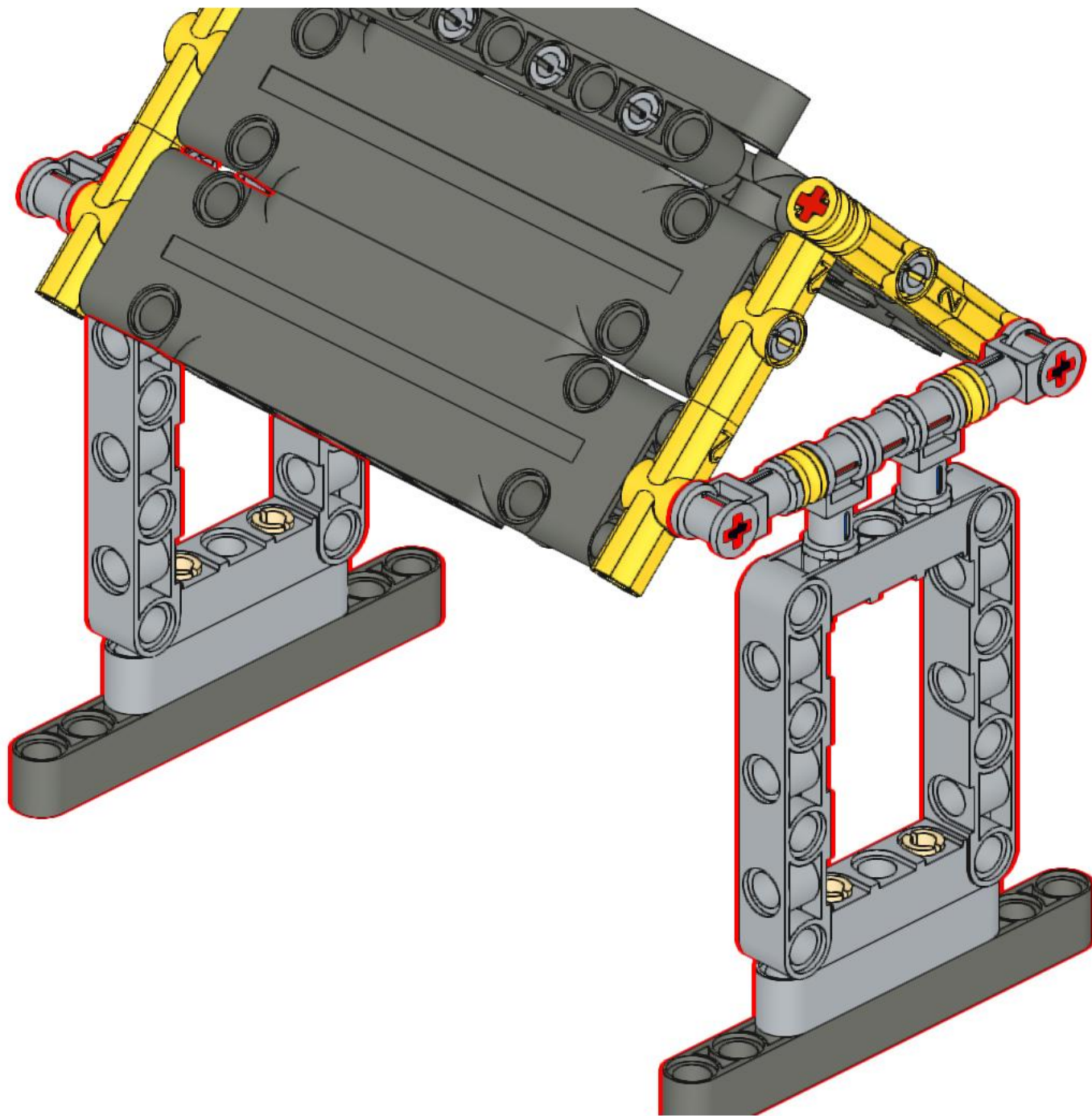
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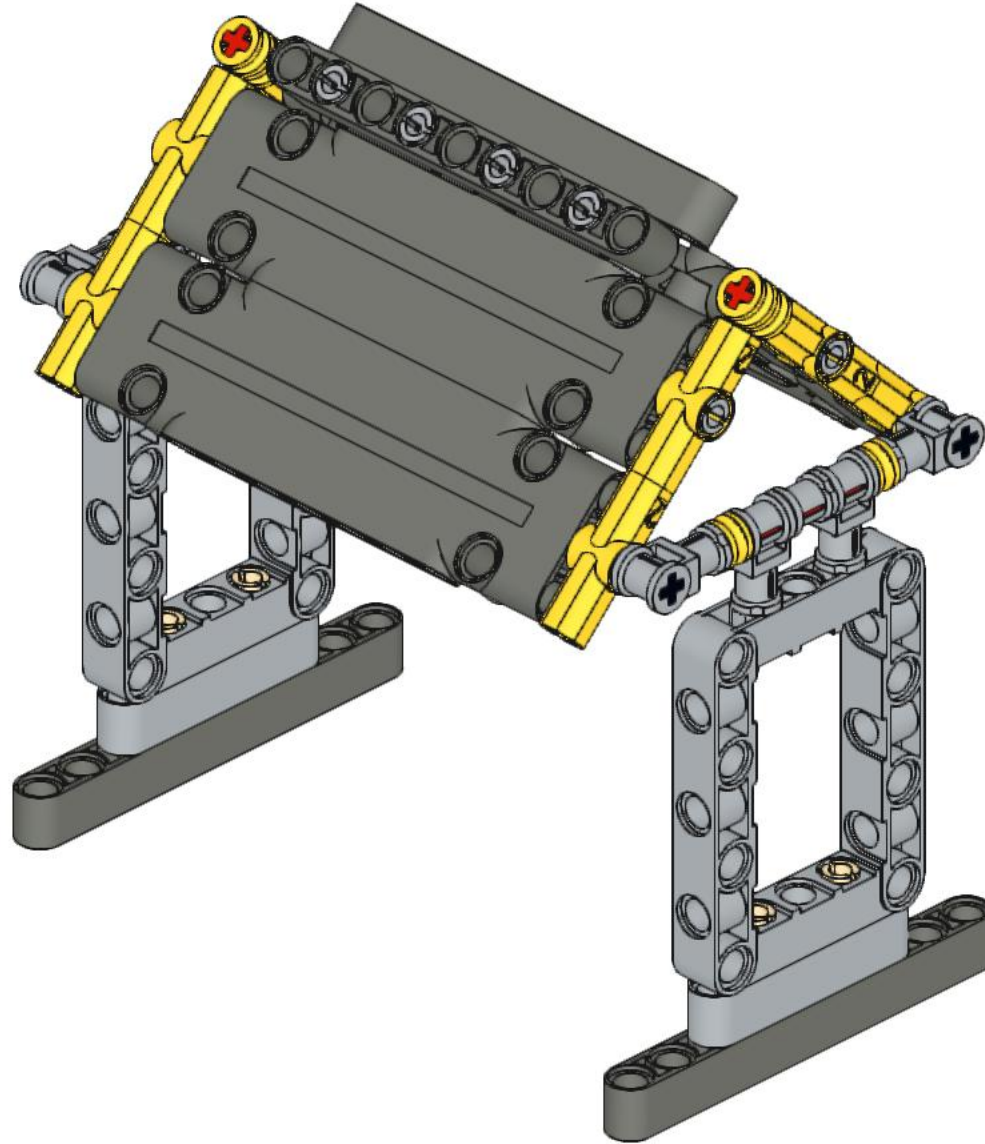
21



22



23



World Robot Olympiad 2024

RoboMission – Junior

机器人任务赛初中组

Additional Challenge “Windmill” for the International Final October 8st 2024 2024国际赛新加任务——“风车”

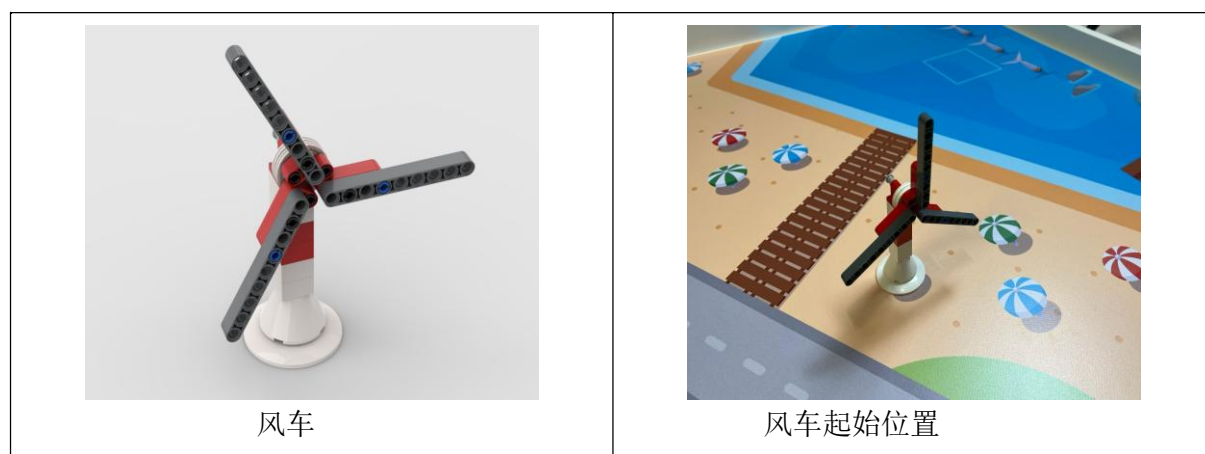
It is not necessary to solve this extra challenge to participate in the International Final!
参加国际赛队伍可以自行决定是否完成该新加任务

There is one windmill on the game field that is always placed on the red umbrella on the right side of the bridge on the beach (see photo). It is parallel orientated to the long side of the field and one blade should always look completely to the sky.

场地上有一个风车，它总是被放置在海滩上桥梁右侧的红伞上（见图）。风车与场地的长边平行放置，其中一个风车叶片应始终完全朝向天空。

It is the task to bring the windmill to the wind park area (square with the light grey line on the sea). Full points are awarded if the windmill is completely in the wind park area (the white line counts towards the area).

机器人任务是将风车带到风电场（海面上带有浅灰色线条的正方形区域）。如果风车完全位于风电场区域内（白色线条也属于该区域），则获得满分。


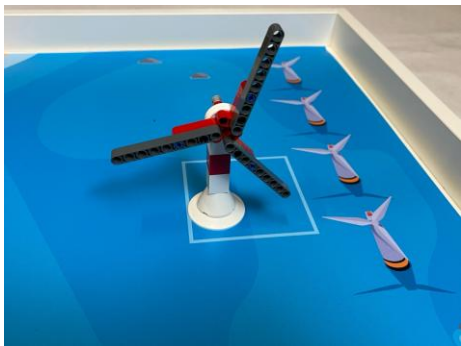
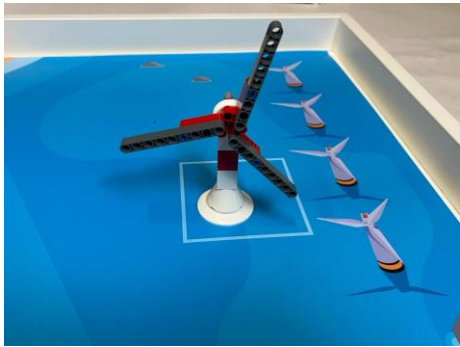



Additional scoring lines will be added to the scoring sheet:

计分表上会增加风车的计分：

Windmill is touching the wind park area 风车接触到风电场区域	5	
Windmill is completely in the wind park area 风车完全进入风电场区域		7
New maximum score 新的总分		127

Scoring Interpretation 计分说明

 <p>5 points (touching) 5分（接触）</p>	 <p>7 points (completely in, white line counts as completely in) 7分（完全进入，白线属于风电场区域）</p>
 <p>7 (completely in) 7分（完全进入）</p>	 <p>0 points – have you ever seen a windmill lying like this? 0分（风车倒了不能计分）</p>

New Full Scoring Sheet新计分表

Team name: _____

Round: _____

Tasks	Each	Max.	#	Total
Create new green areas 建造新的绿色区域 <i>Maximum one lake element and two green elements count per park area. Objects must stand upright.</i> 每个公园区域最多只能放1个湖和2个绿色元素。只有元素仍保持直立才可以得分。				
Lake or green element partly in a green park area湖或绿色元素部分进入一个公园区域	4			
Lake or green element completely in a green park area湖或绿色元素完全进入一个公园区域	8	48		
Greening houses 绿化房屋 <i>Maximum one green starter set per area counts.</i> <i>Door is considered closed if it is in top-view inside the grey area.</i> 每个区域最多只能有1个绿色入门套装可以得分。 从俯视角度看，门完全进入灰色区域时才认为门关闭了				
Green starter set partly in grey area of a house绿色入门套装部分进入一个房子的灰色区域	4			
Green starter set completely in a grey area of a house (the green area inside the middle house belongs to the grey area) 绿色入门套装完全进入一个房子的灰色区域 (中间房子里面的绿色区域也属于灰色区域)	8	24		
Additionally: Green starter set is inside the house and door closed加分：绿色入门套装被放到平房里面并且门关闭		8		
Electrical charging and connection 充电和连接				
E-Bike is completely inside the charging area A电动自行车完全进入充电区A	7	14		
Cable is touching the charging area B电缆接触到充电区B	5			
Cable is completely the charging area B电缆完全进入充电区B		11		
Bonus for Fences & Apartment houses 栅栏&高楼的加分				
Apartment house is not damaged or moved高楼没有被损坏或移动	3	6		
Fence is not damaged or moved栅栏没有被损坏或移动	3	9		
International Final: Windmill 国际赛新加任务：风车				
Windmill is touching the wind park area风车接触到风电场区域	5			
Windmill is completely in the wind park area风车完全进入风电场区域		7		
Maximum score 最高分		127		

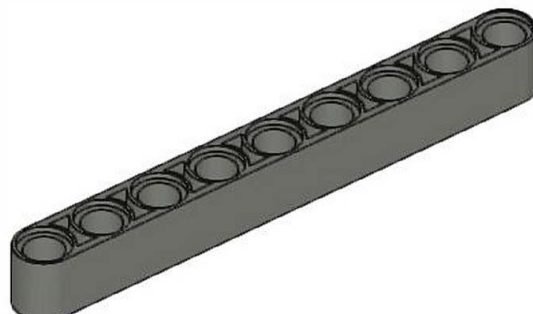
惊喜规则 Surprise Rule	
本轮总分 Total Score in this run	
本轮用时 Time in full seconds	



9x
2780
Black



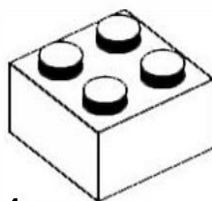
1x
3705
Black



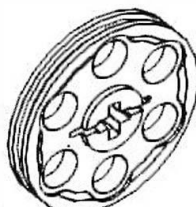
3x
40490
Dark Bluish Gray



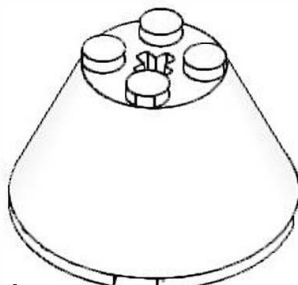
1x
3713
Light Bluish Gray



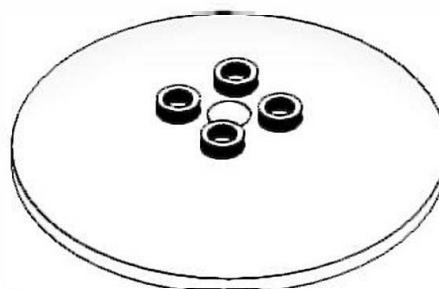
4x
3003
White



2x
4185
White



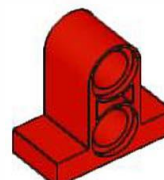
1x
3943b
White



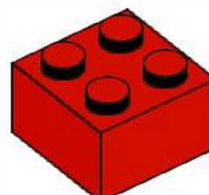
1x
44375a
White



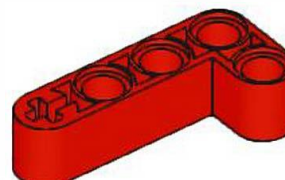
3x
43093
Blue



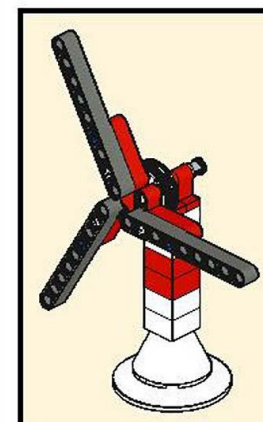
2x
32530
Red



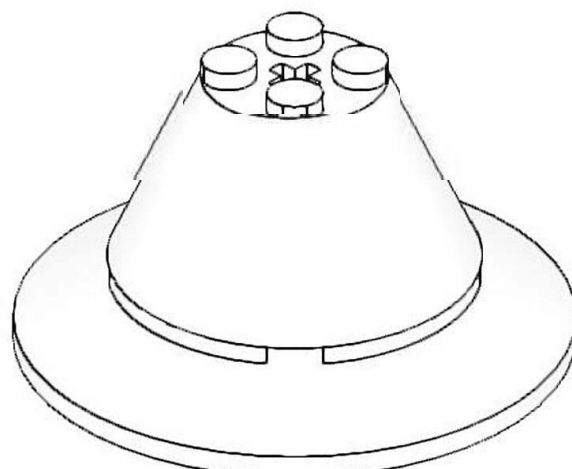
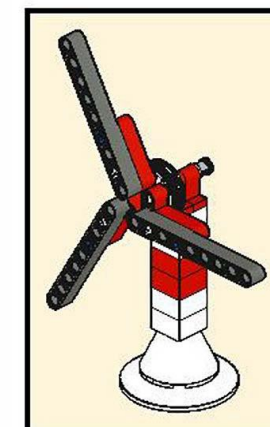
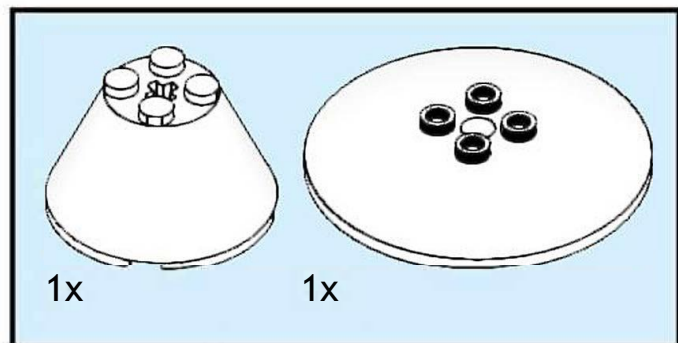
2x
3003
Red



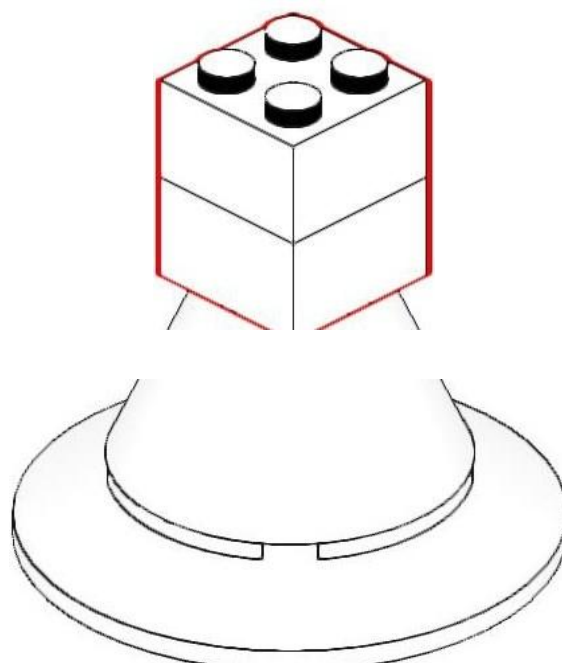
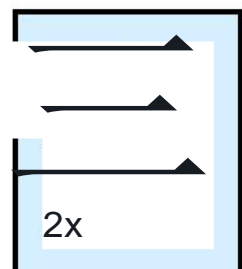
3x
32140
Red



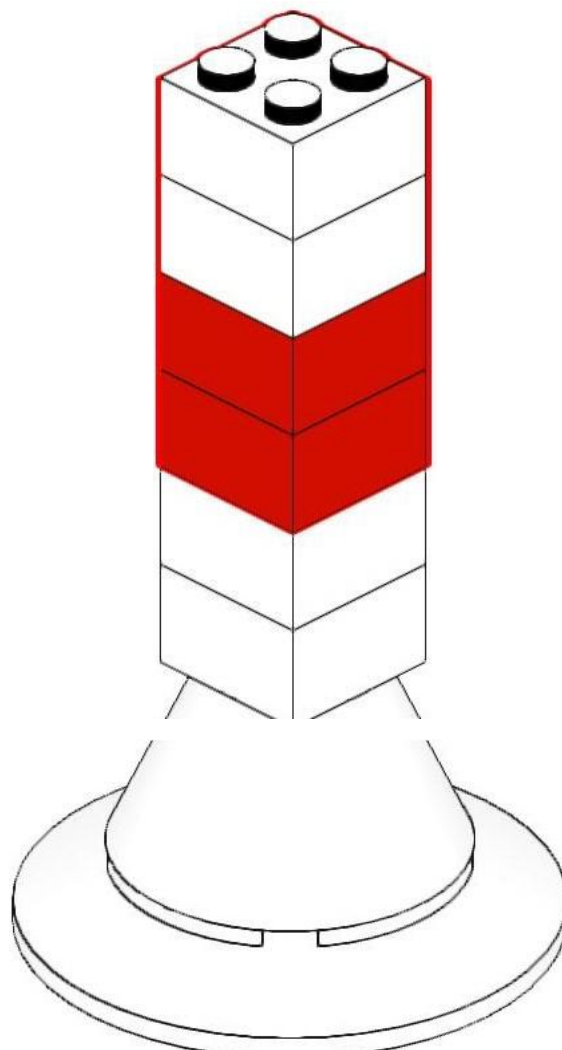
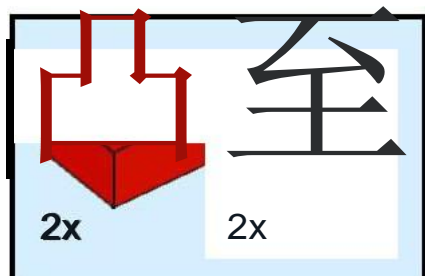
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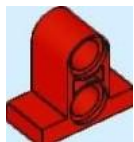
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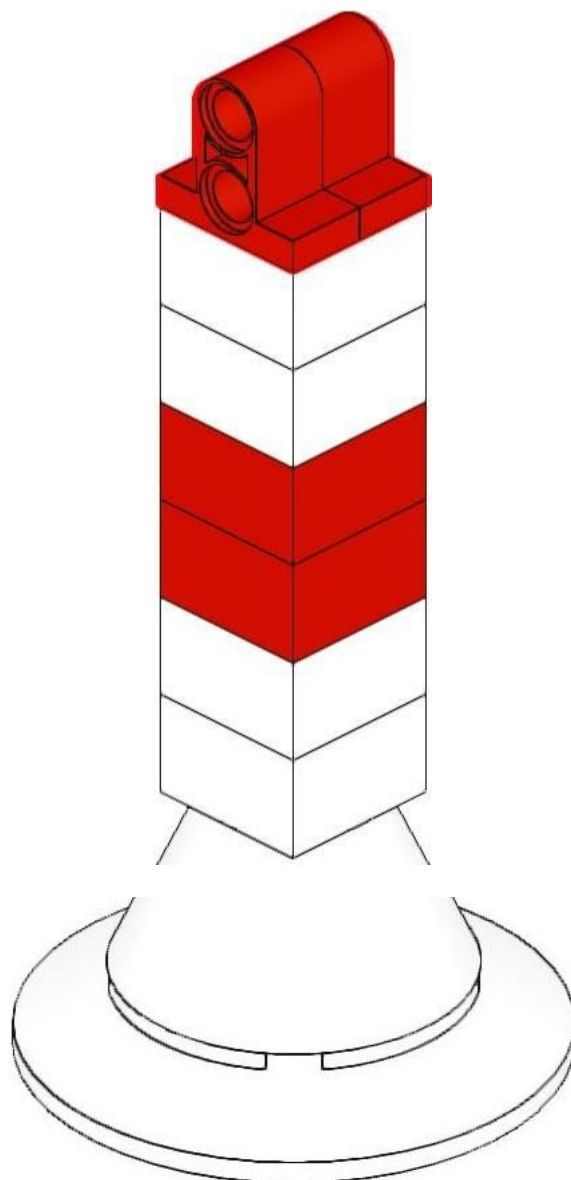
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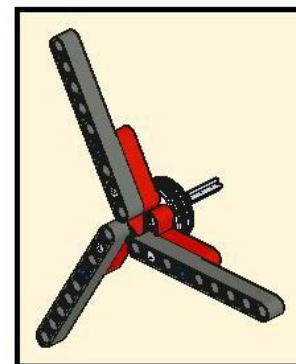
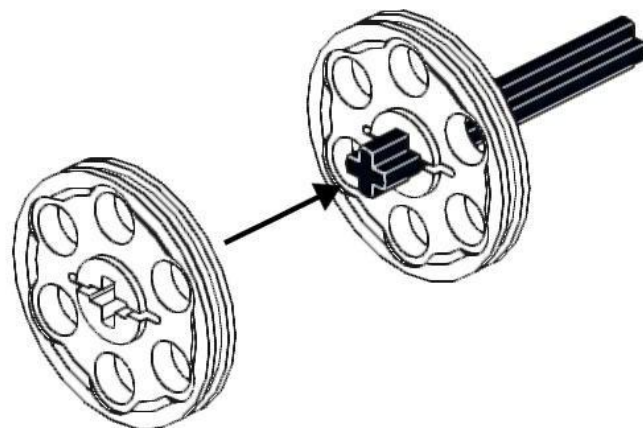
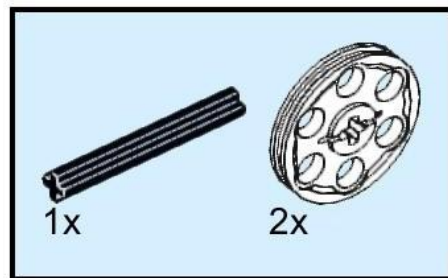
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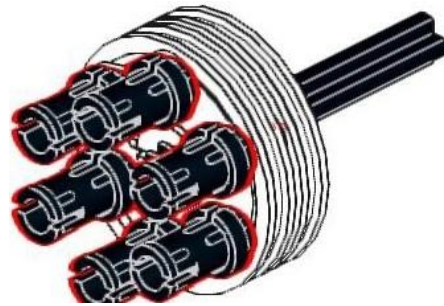
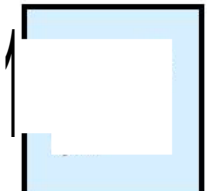
2x

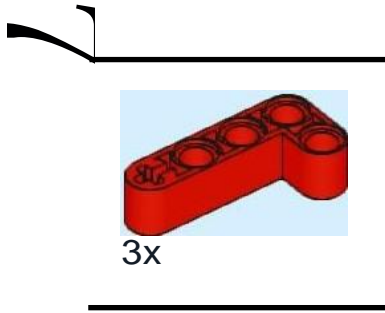


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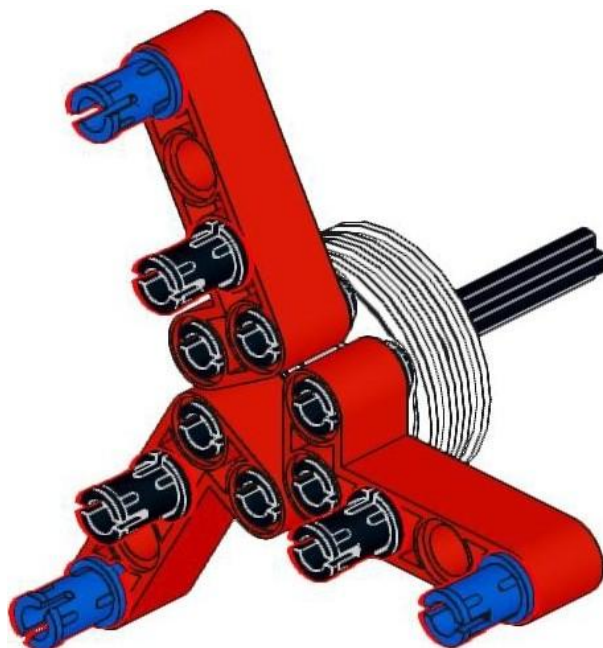


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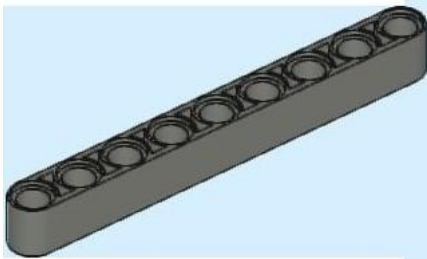




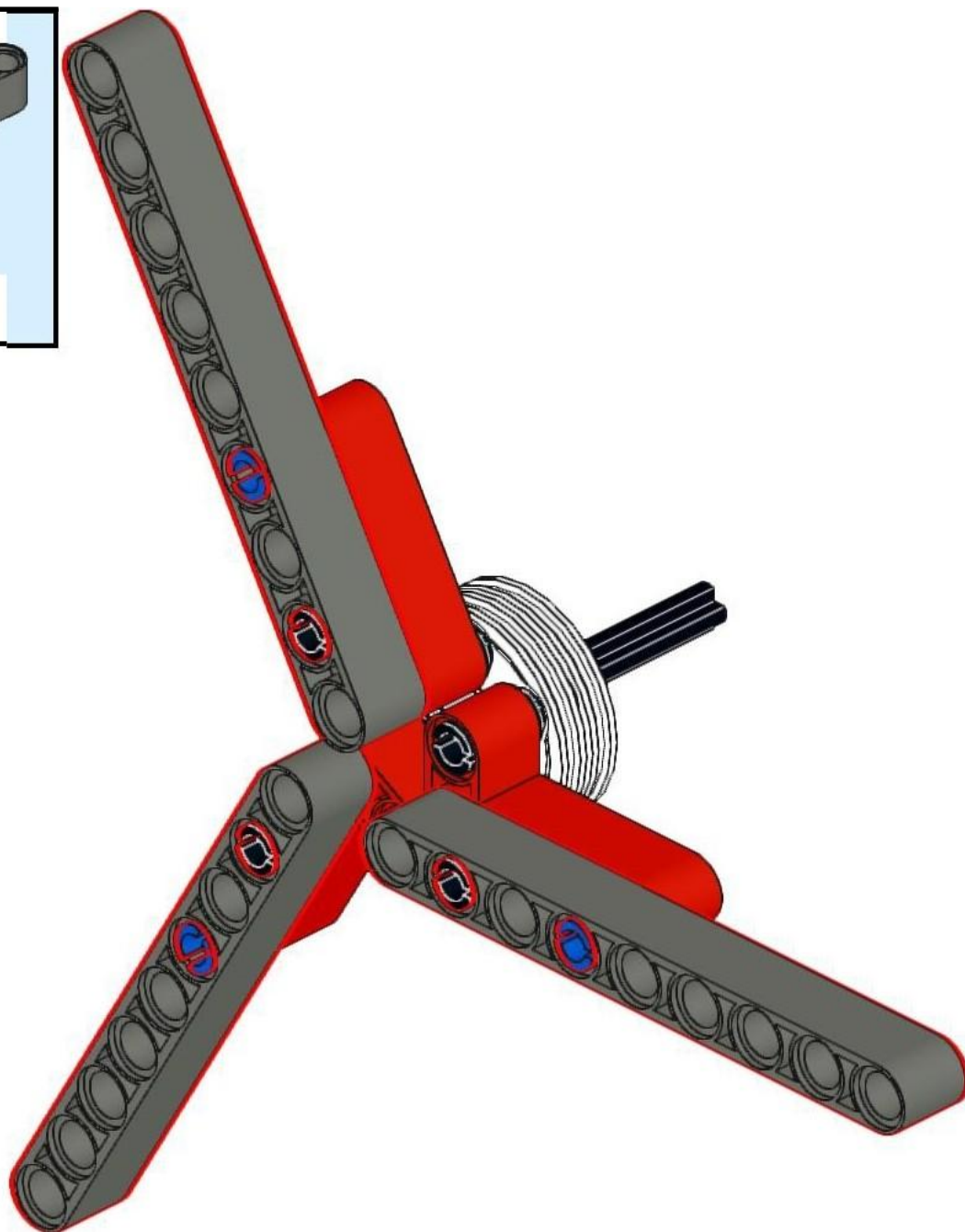
8 戸 -



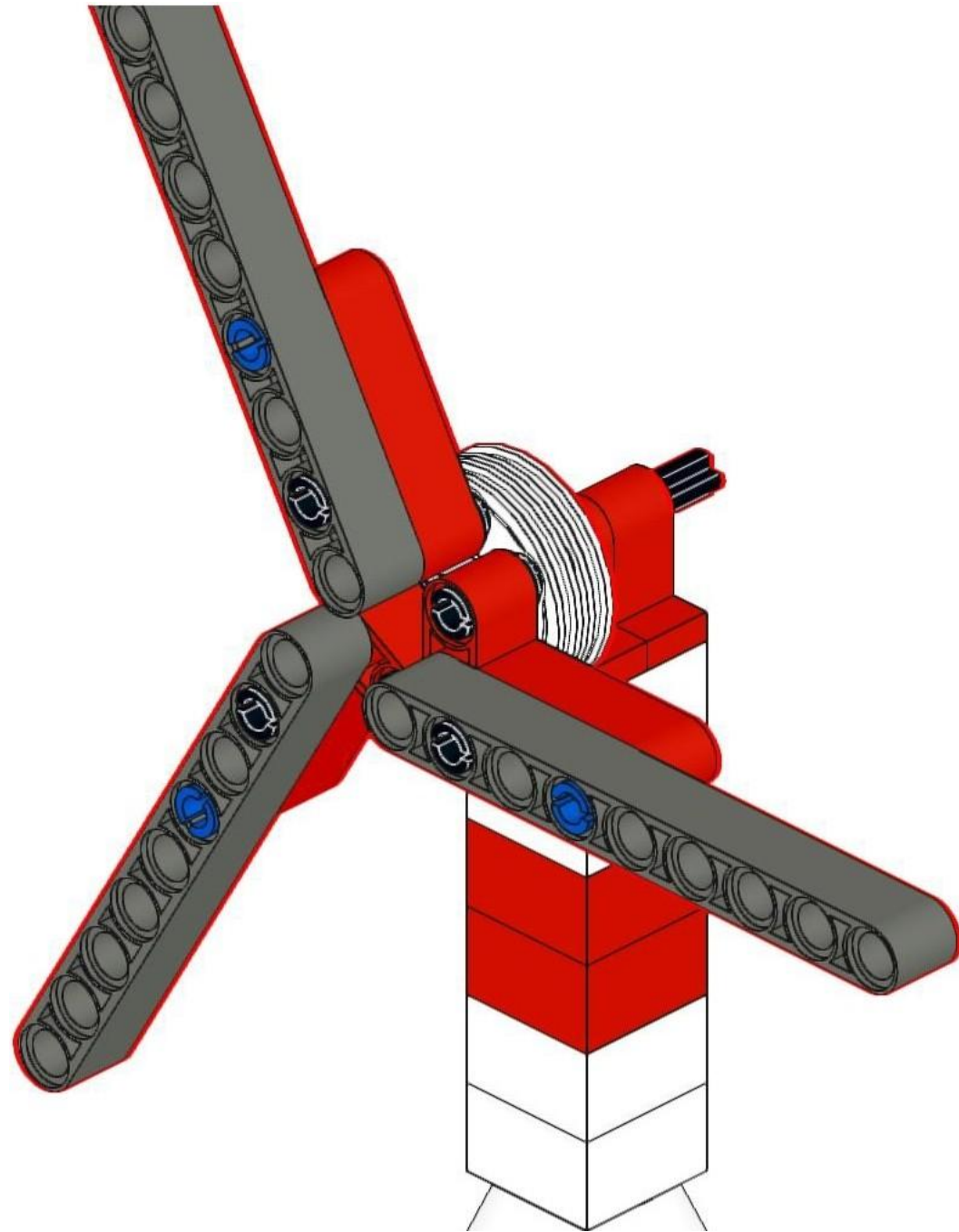
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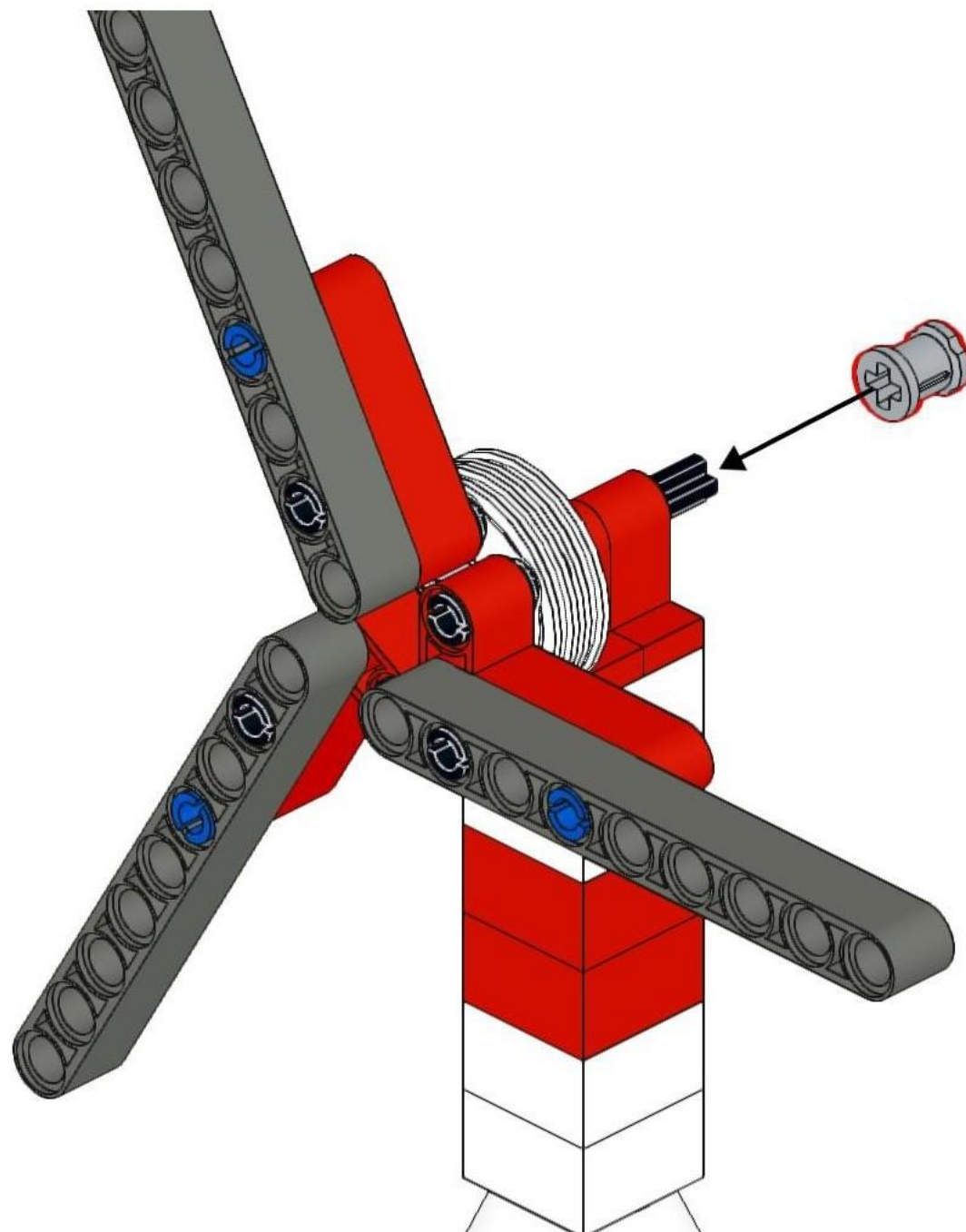
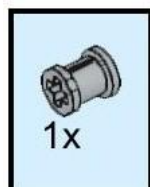
3x



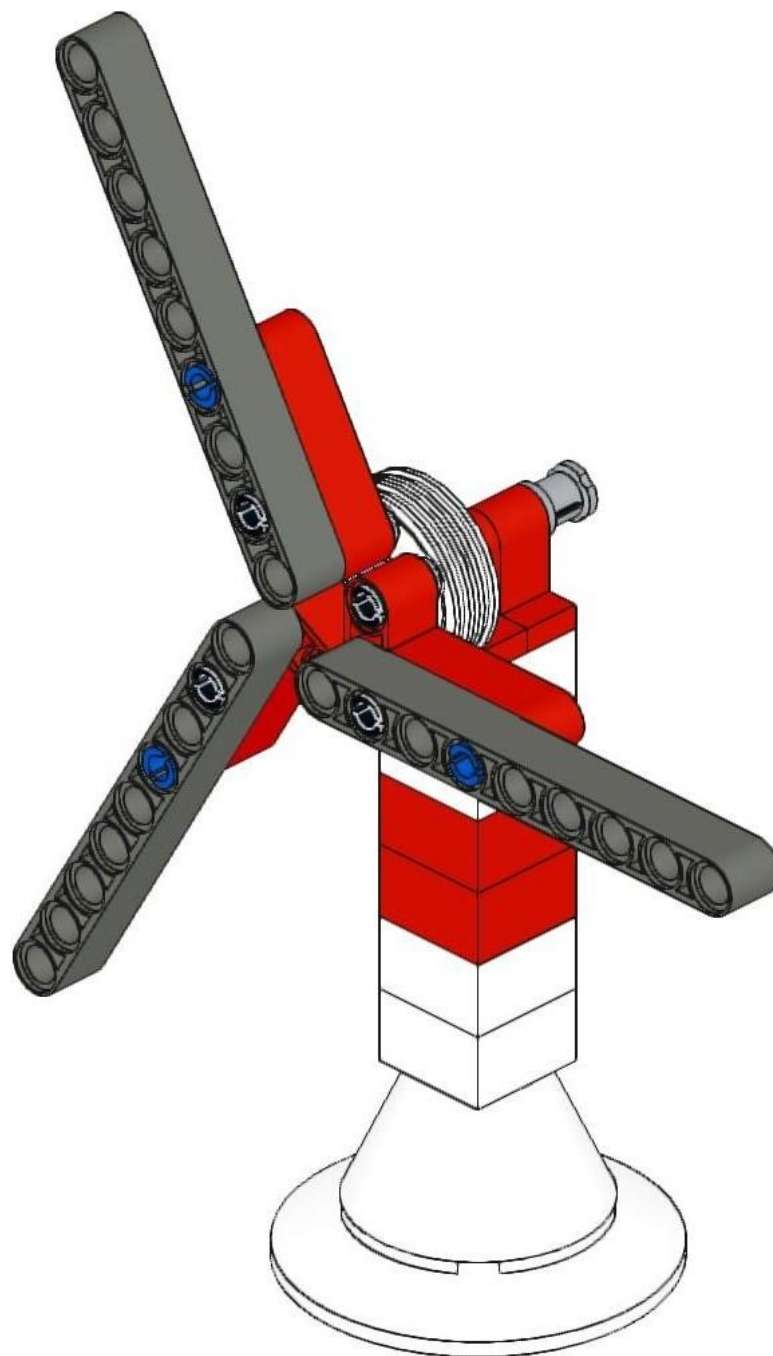
10



11



12



World Robot Olympiad 2024

RoboMission – Senior

高中组机器人任务赛

Additional Challenge for the International Final!

October 8th 2024

2024WRO国际赛新增任务

The two-house elements on the top-right on the game field are always placed on stands, with that it is more difficult to collect those elements. The elements will always be placed on the stands, it is not possible to ignore this change.

场地右上方的两个房屋元素将始终放置在架子上，增加了收集这些房屋元素的难度。队伍不能忽视这个变化。

The task and the scoring do not change.

机器人的任务和计分不变。



Stands placed on green/blue markings on the top-left corner.

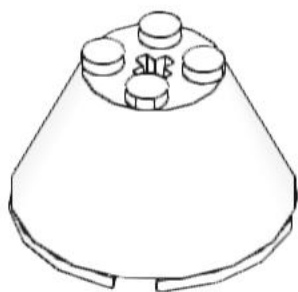
架子放在左上角的蓝绿色标记，并且固定在场地上。

Stands will be fixed to the game mat.

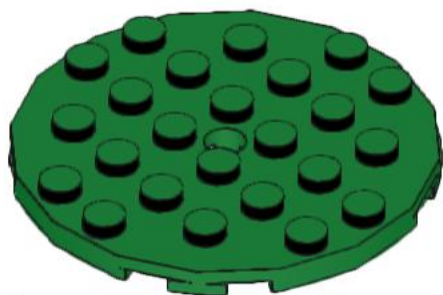


Example of placement of two house elements on the stands.

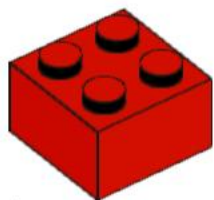
房屋元素放在架子上的示例



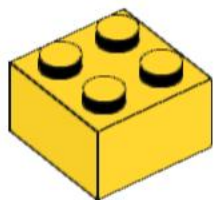
2x
3943b
White



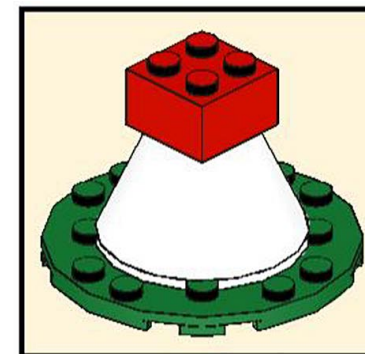
2x
11213
Green



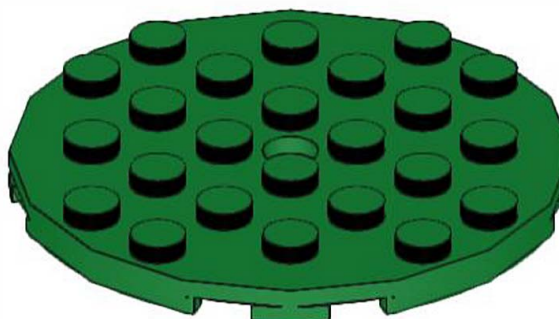
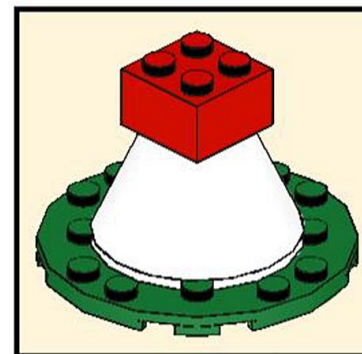
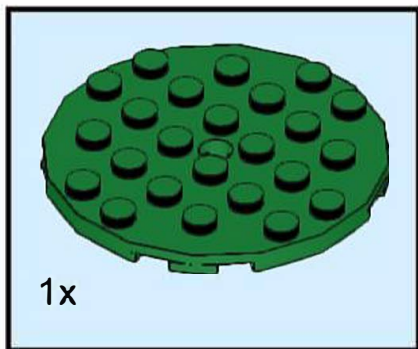
1x
3003
Red



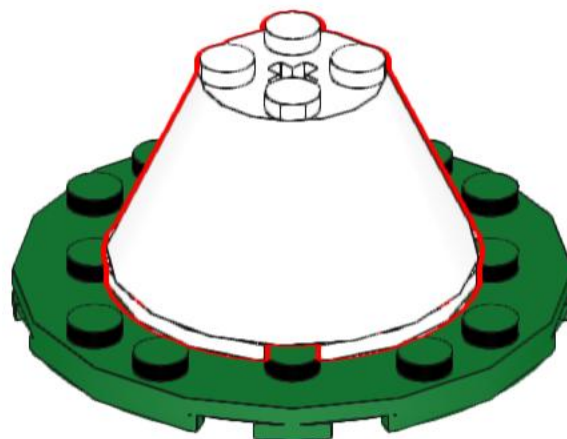
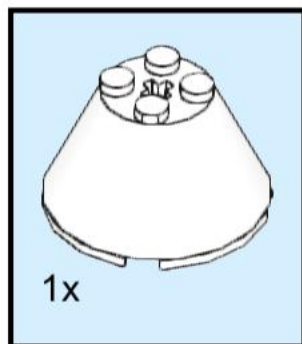
1x
3003
Yellow



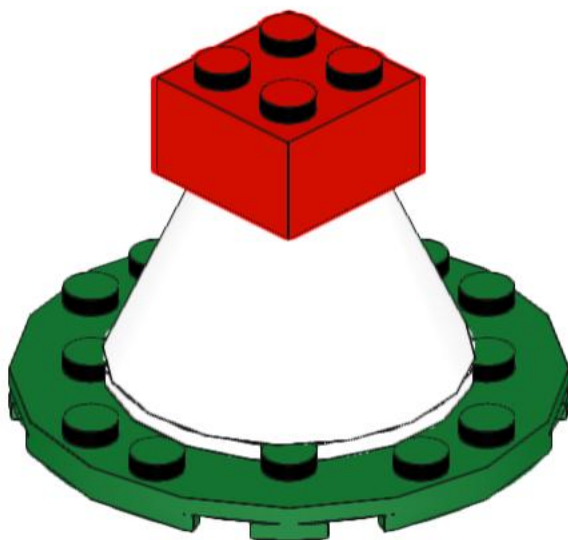
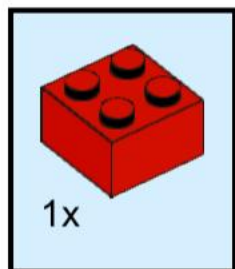
1



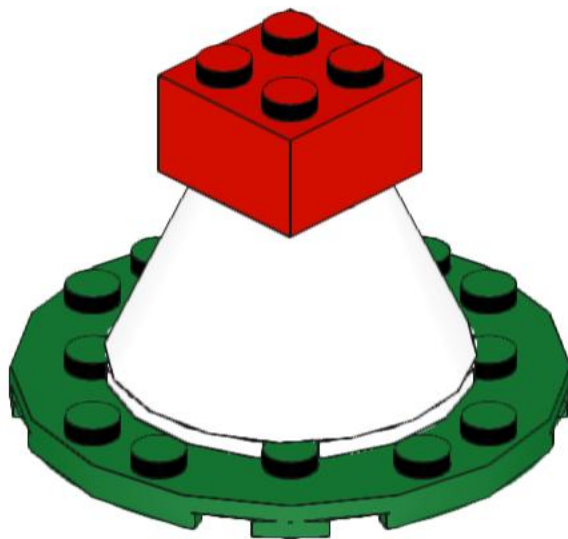
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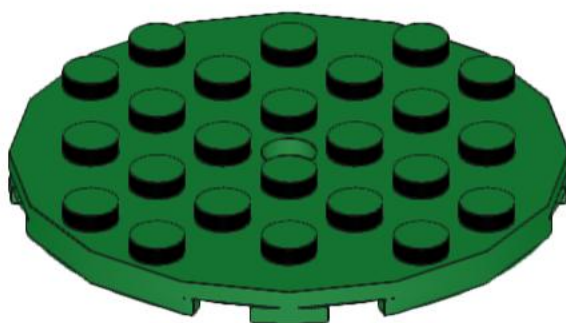
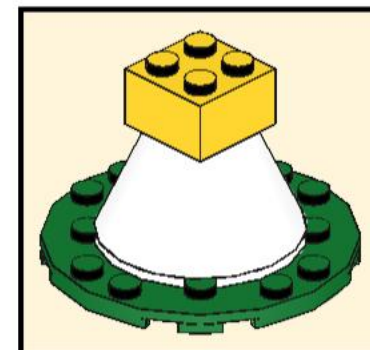
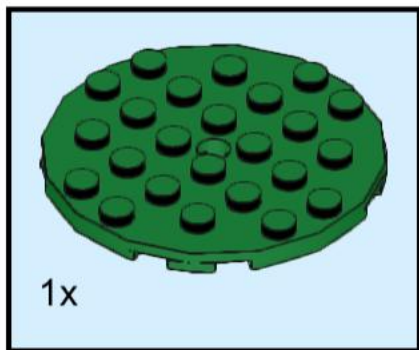
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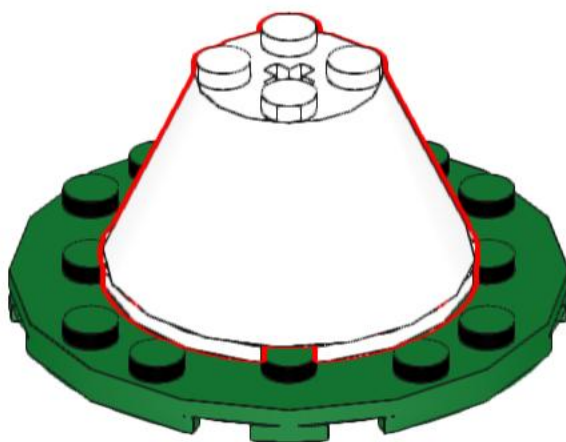
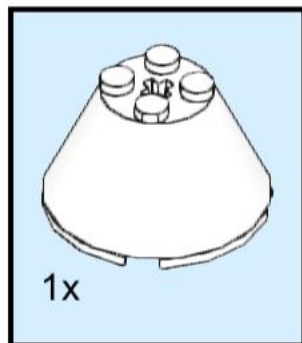
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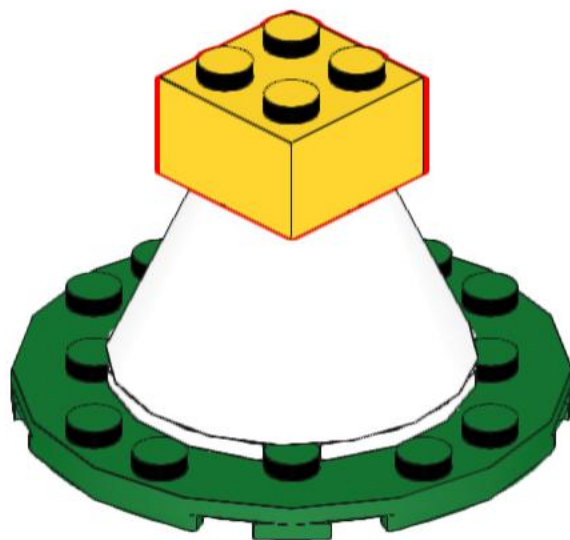
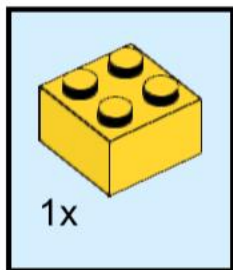
5



6



7



8

