



# Прости и задвижвани машини

# Simple & Powered Machines

## Pulleys

Все още не сме  
говорили за макарите.  
През цялото време ги  
виждам пред себе си!

О, вчера направих  
играчка с макари!

Една моя съседка не  
слиза, за да пазарува,  
и има система от  
макари, за да вдига  
покупките си до своя  
етаж!

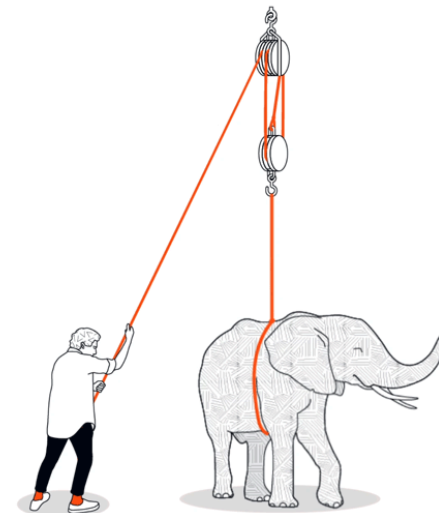


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Можете ли да  
си представите  
как работят  
макарите?

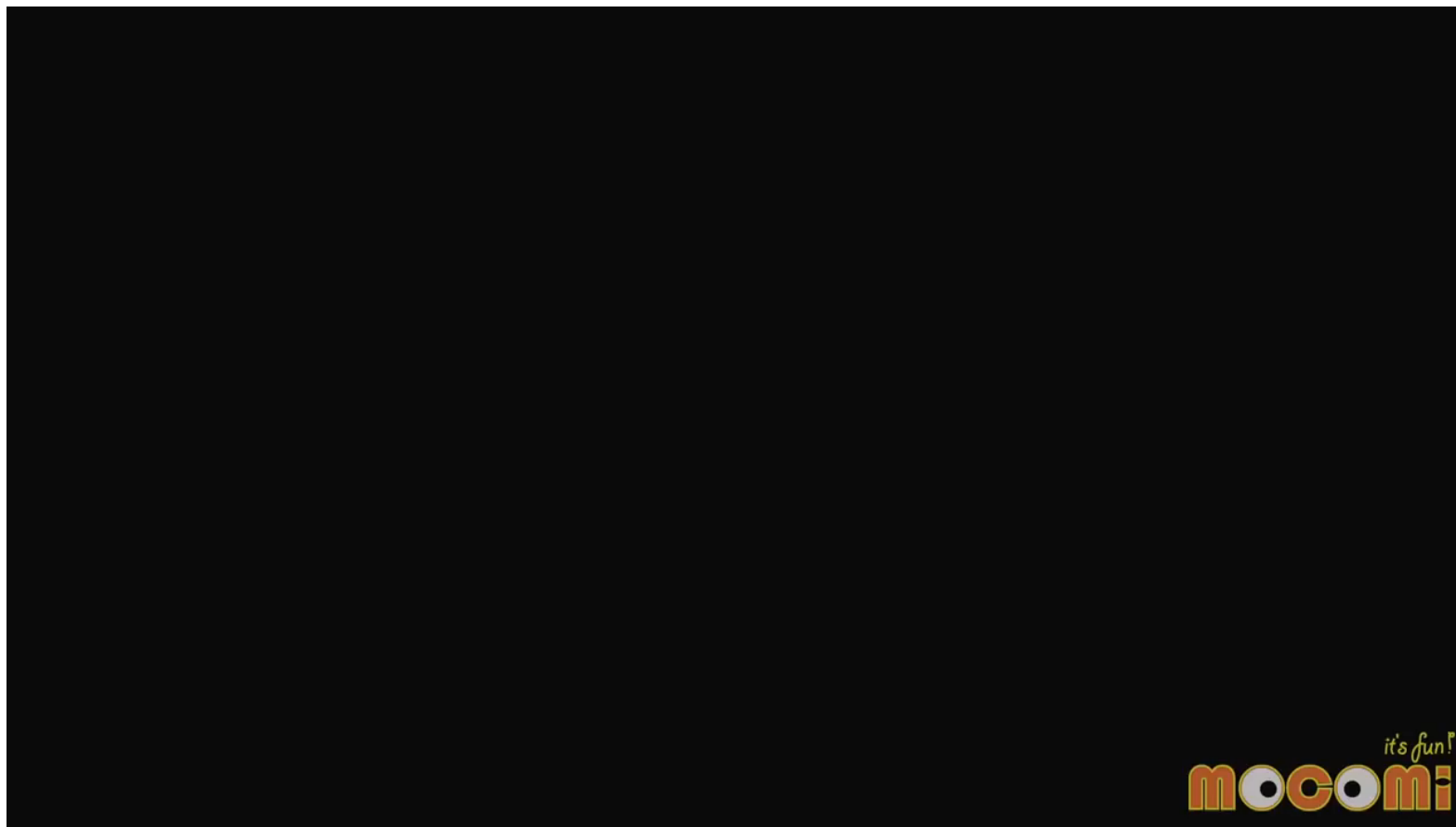


Макарите се  
използват още от  
Древността.



Макарите са кръгли дискове, които се въртят около оси, минаващи през центъра им. По периферията им има жлеб, през който минава въже.

### Какво е макара и как работи?

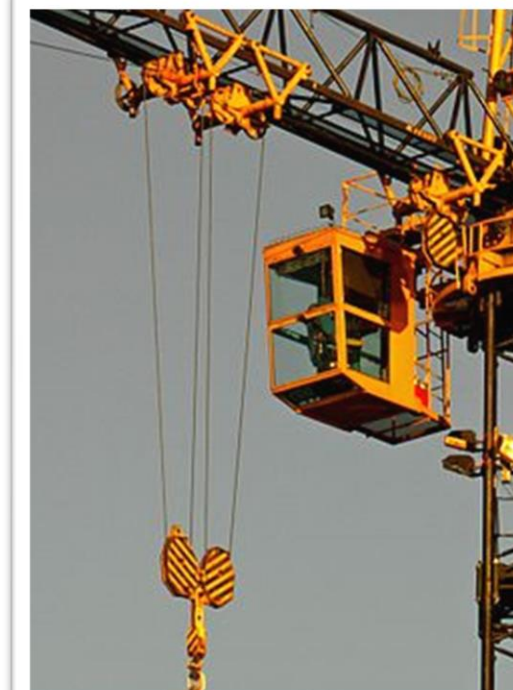


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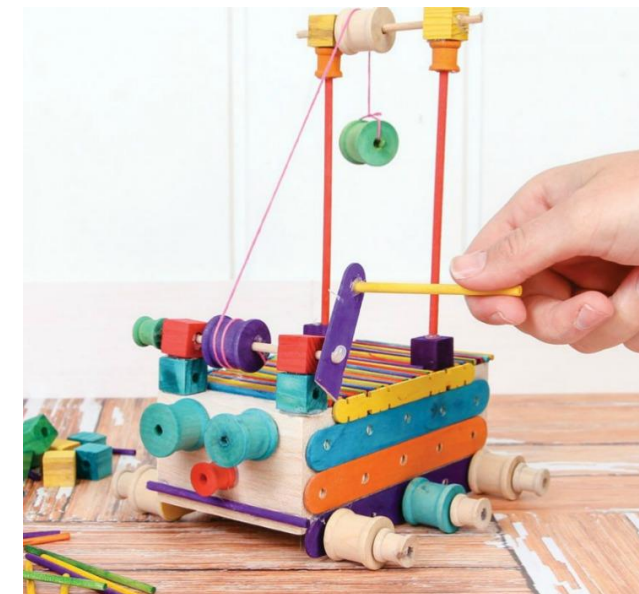
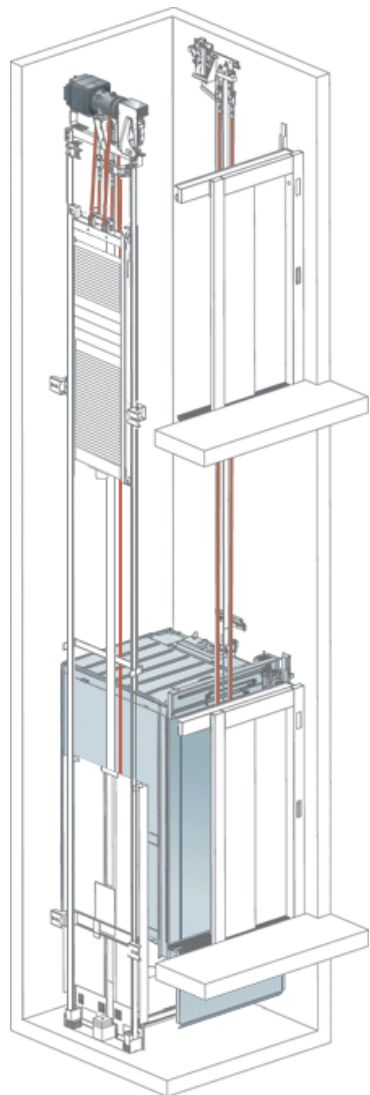
Можете ли да  
дадете примери за  
механизми, при  
които се използват  
макари?



Позволете на учениците да дадат примери за предмети/механизми с макари, преди да говорите за изображенията.

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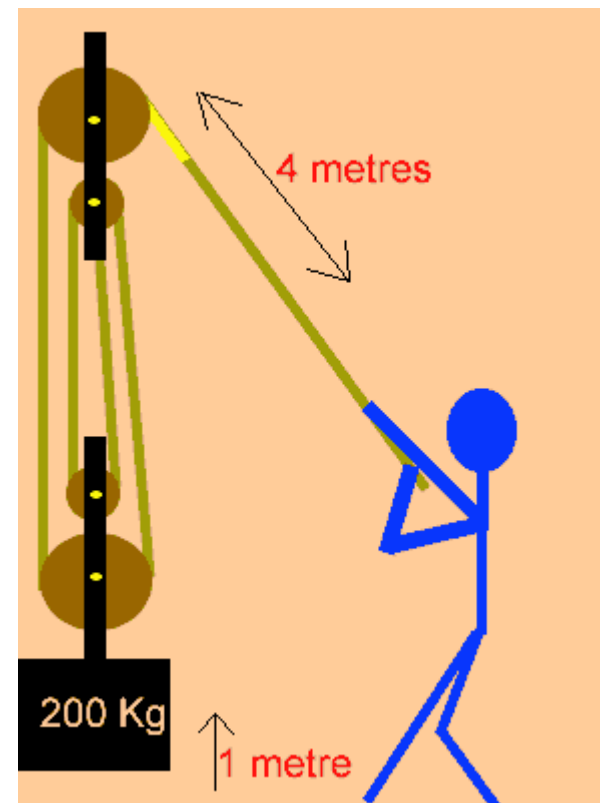


Помислете и за тези!





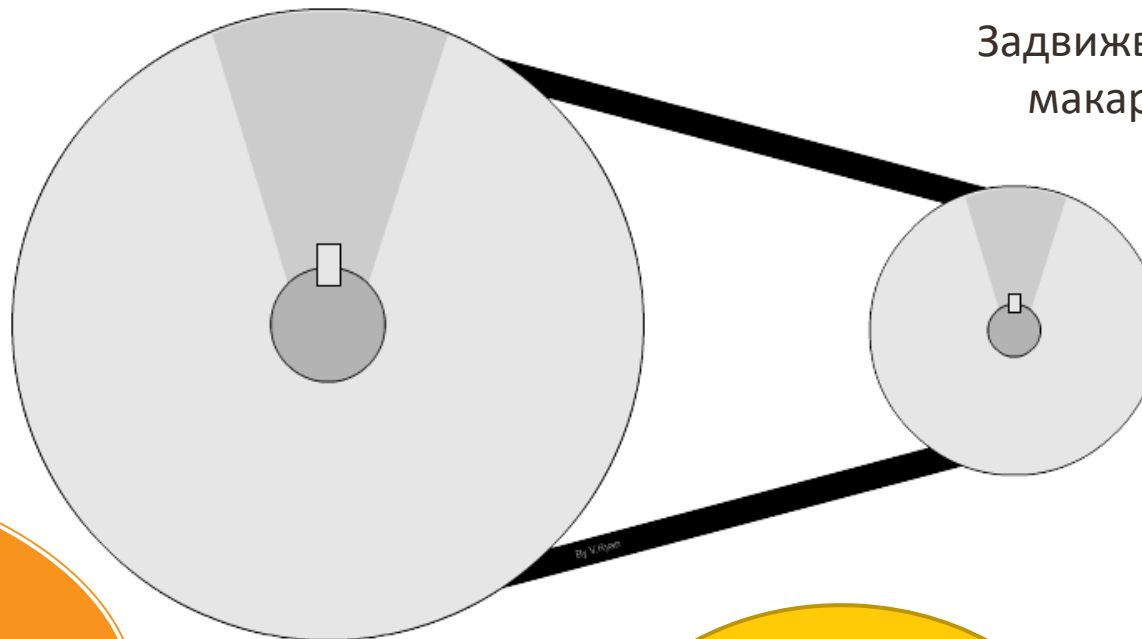
Защо  
предпочитаме да  
използваме повече  
макари и повече  
въжета?



Споменете, че при много макари упражняваната сила е по-малка.

Движеща макара

Задвижвана  
макара

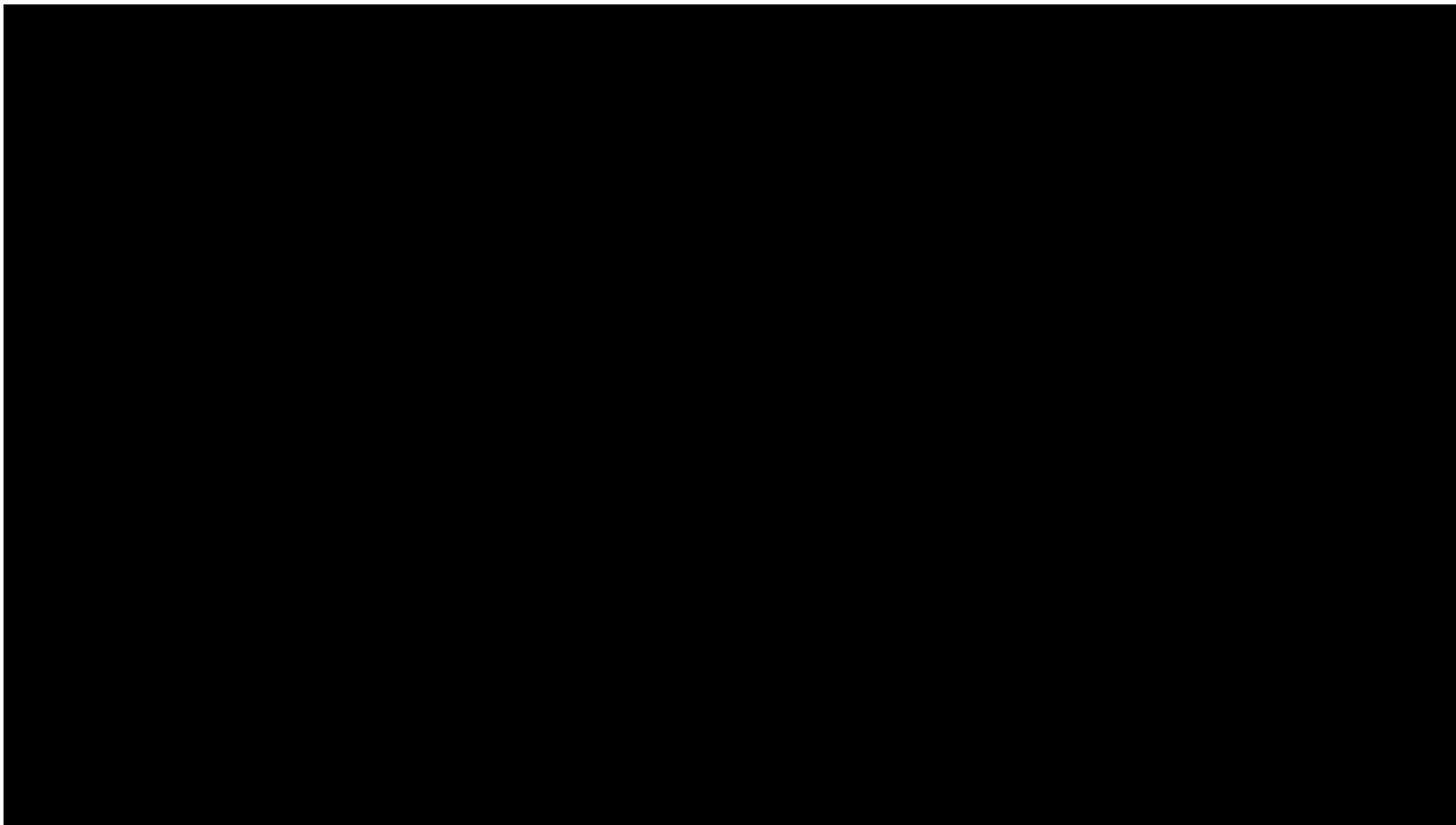


Когато имаме повече от една макара, едната се нарича движеща макара (тази, която въртим), а другата – задвижвана макара (тази, която се върти сама).

Движат ли се в една и съща или в различна посока?

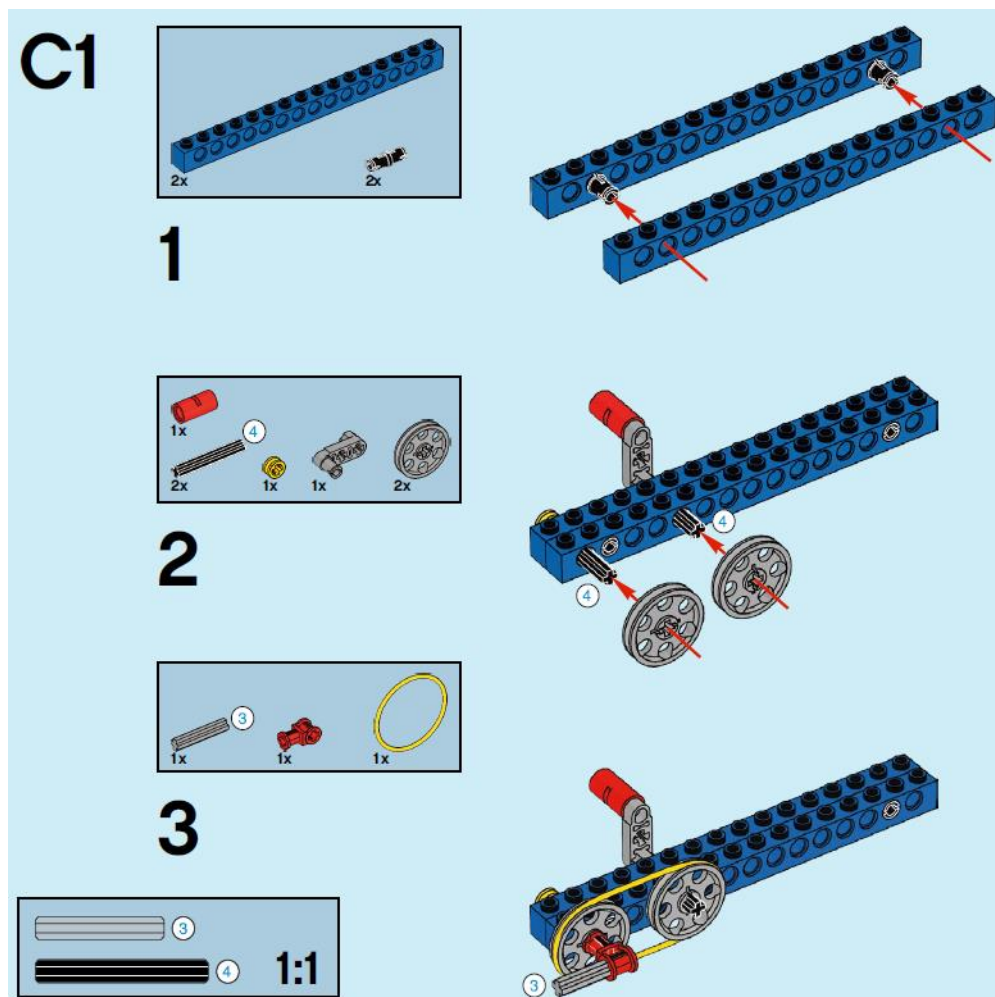


Как можем да направим макара?



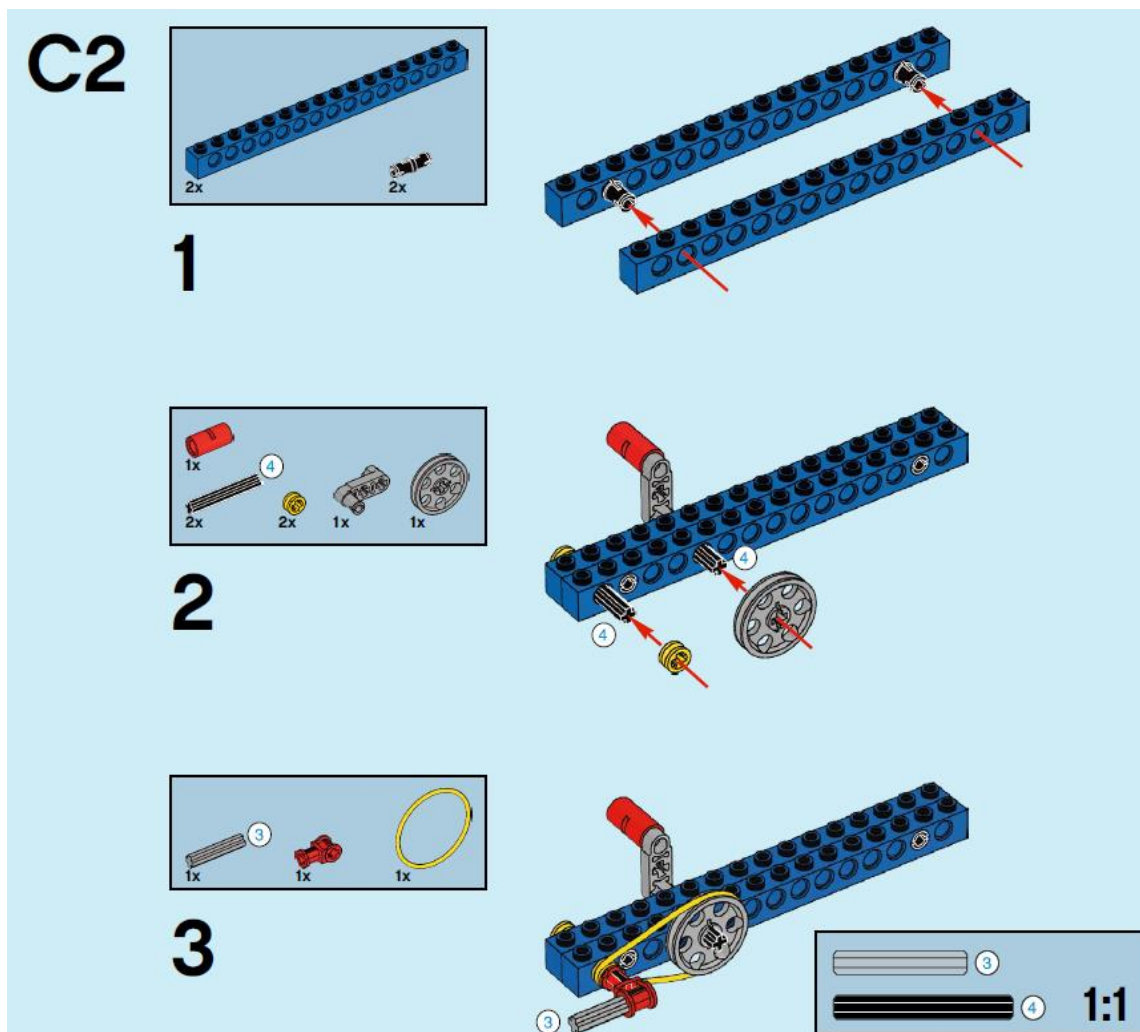
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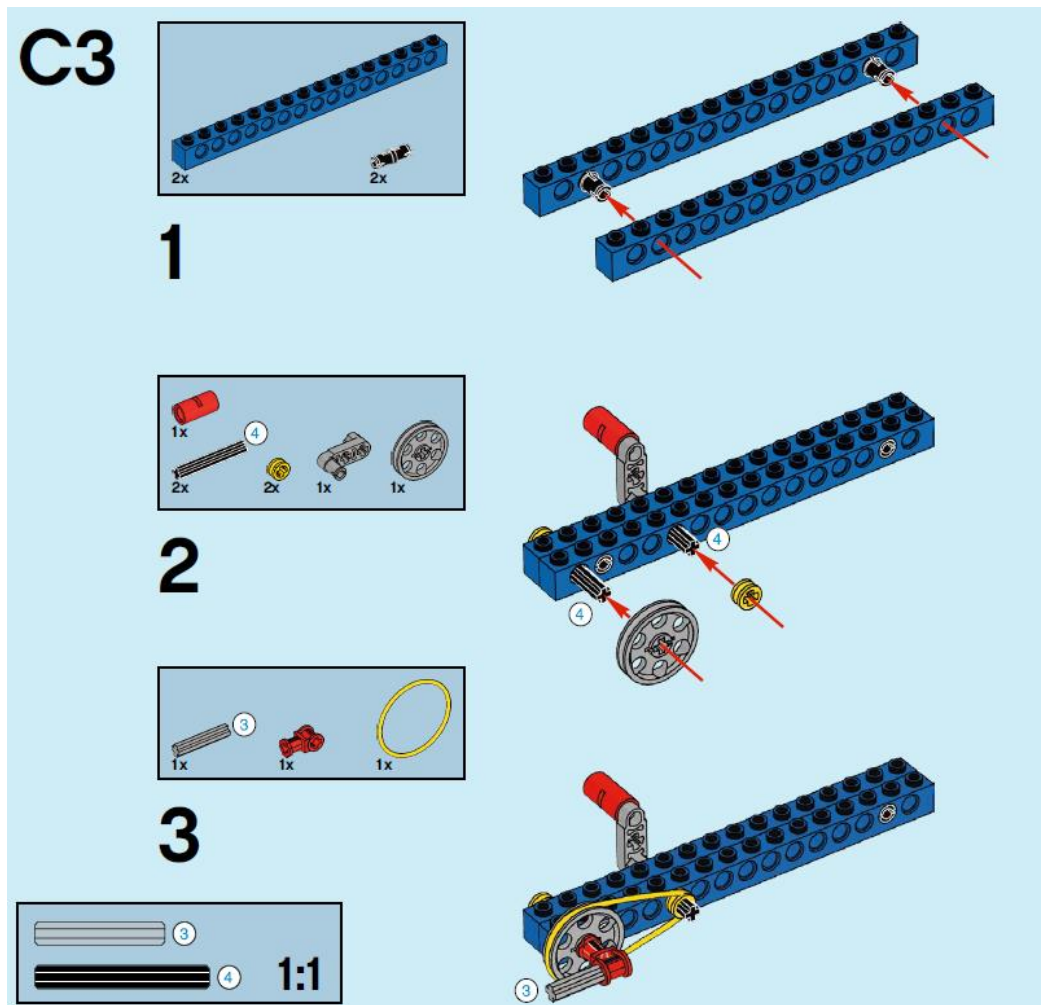
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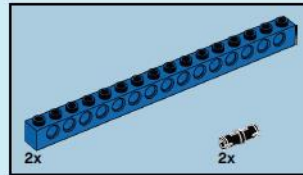
## Pulleys



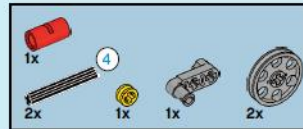
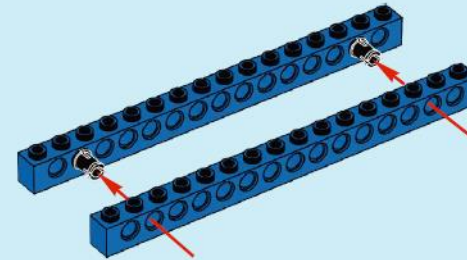
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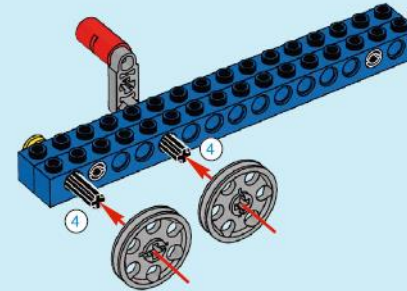
C4



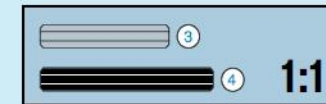
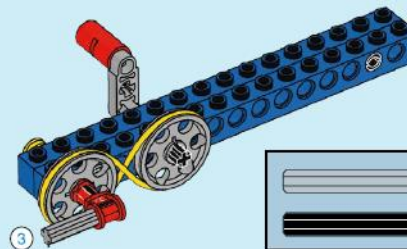
1



2

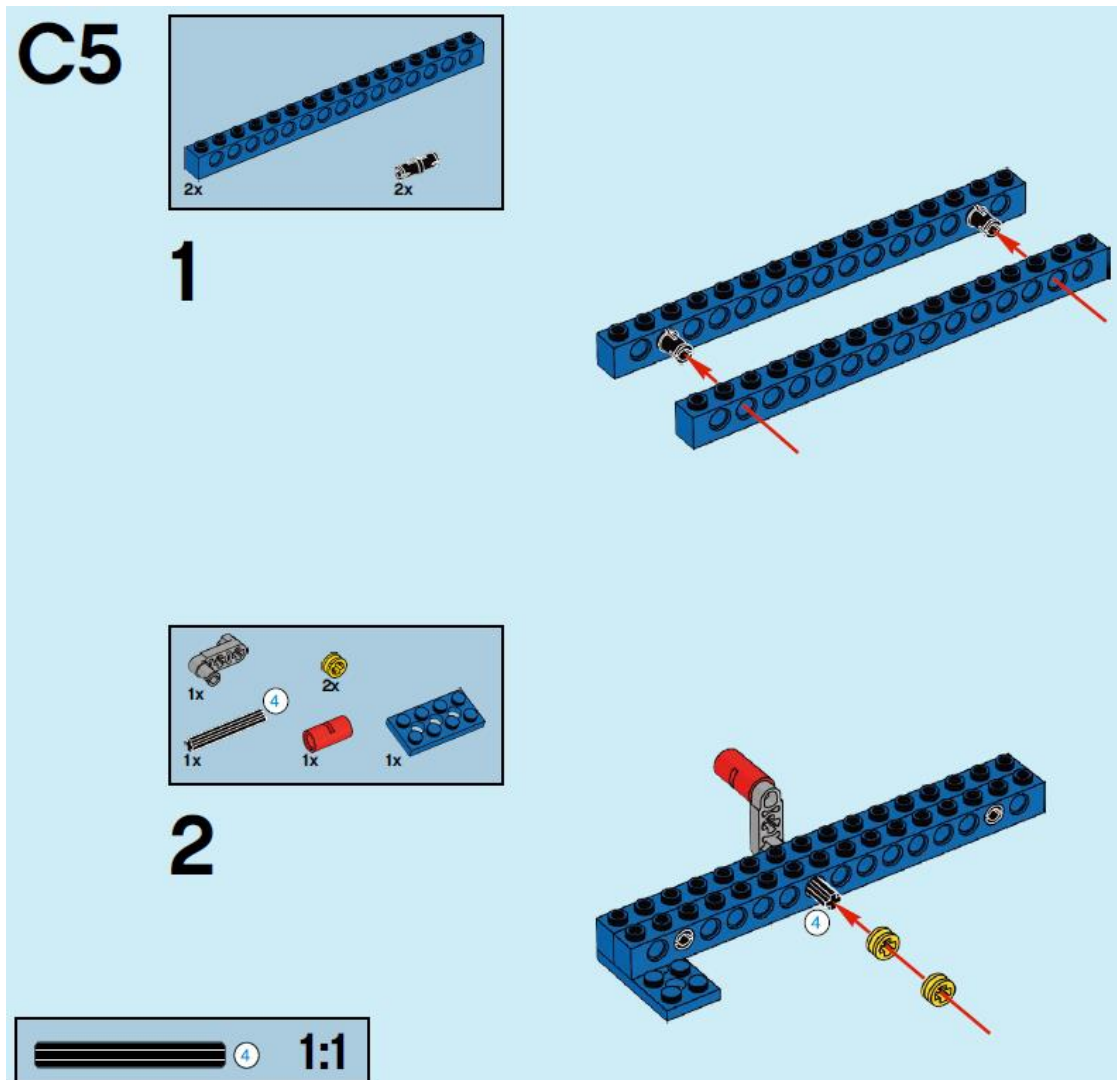


3



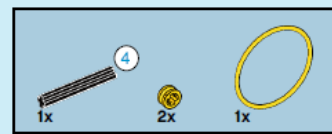
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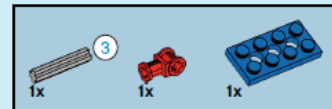
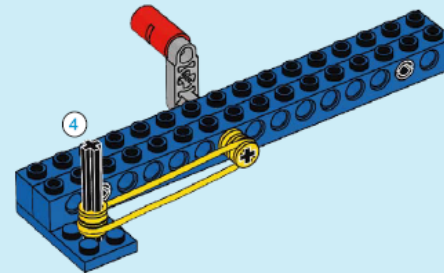


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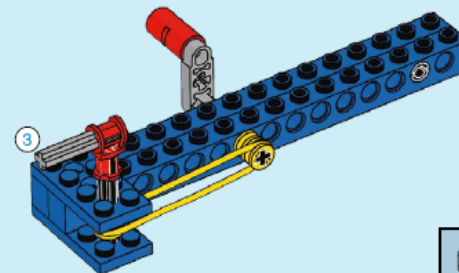
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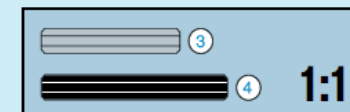
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4



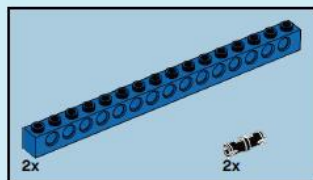
C5



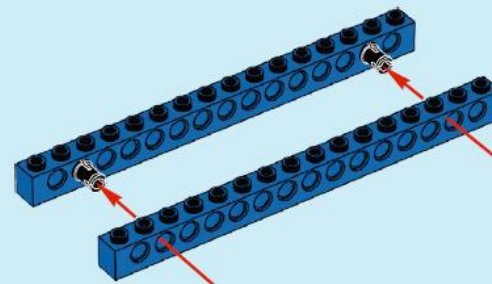
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## Pulleys

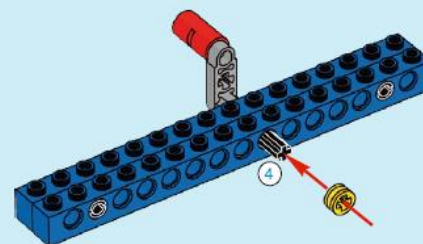
C6



1

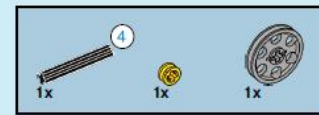


2

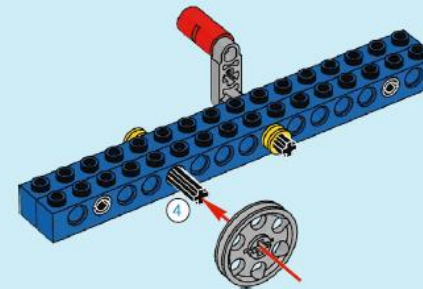


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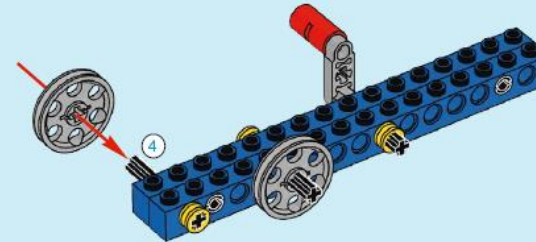
## Pulleys



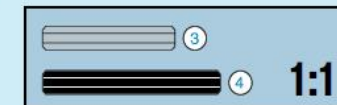
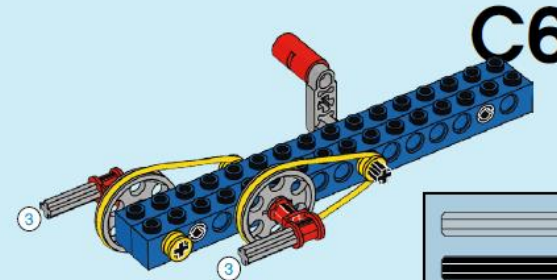
3



4



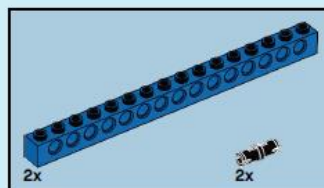
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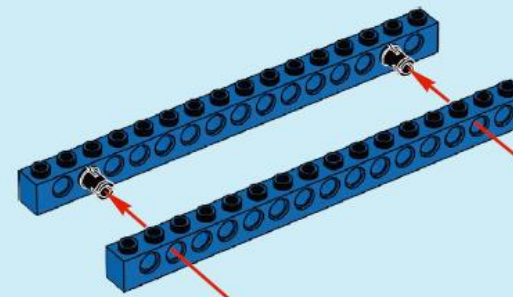
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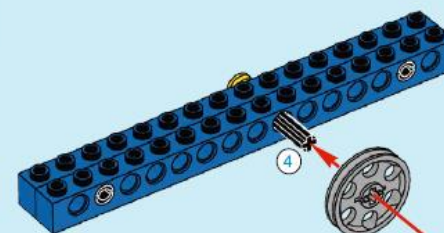
C7



1

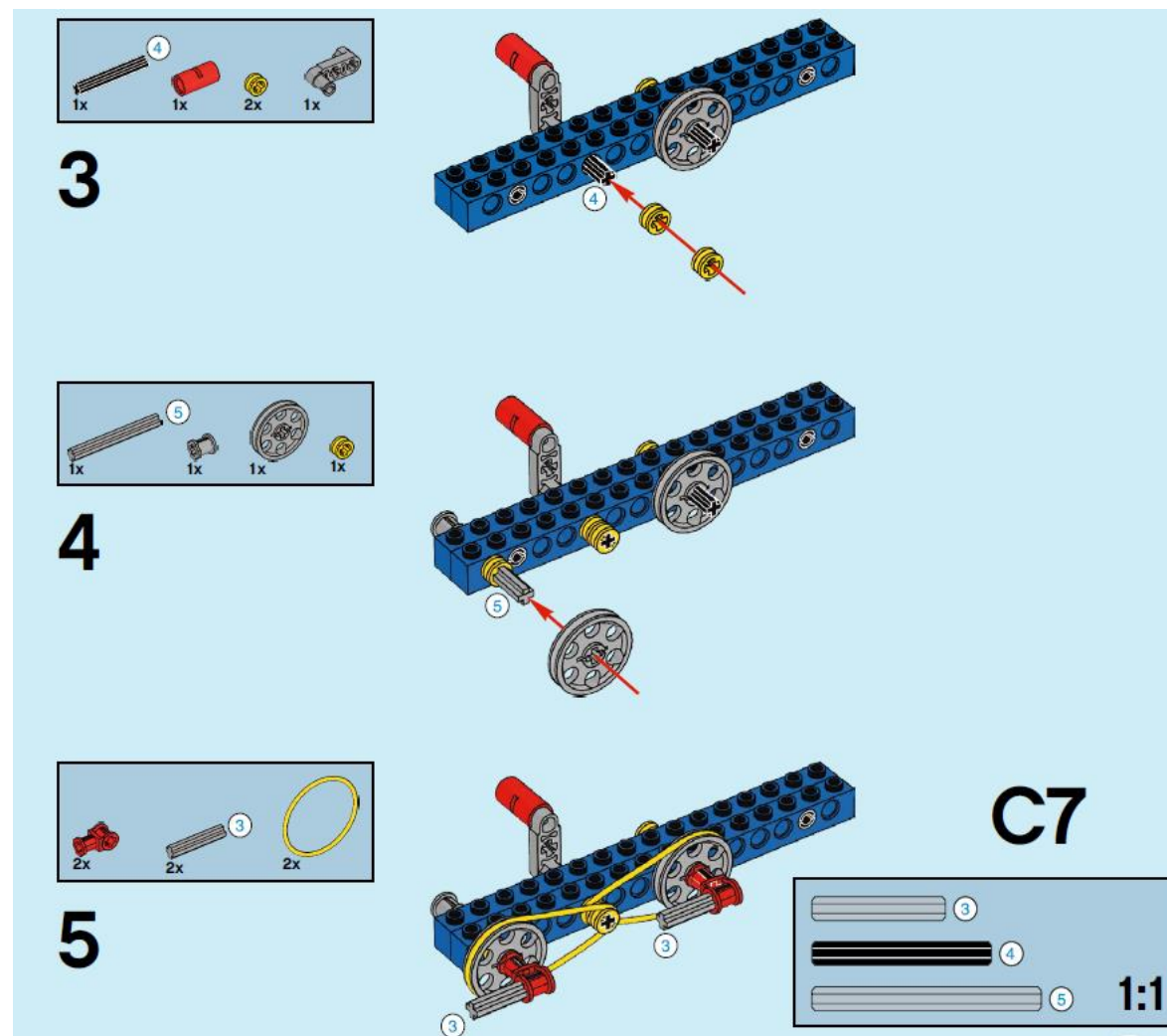


2



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*Когато завършите работния лист,  
разглобете конструкцията си  
и поставете всички части на мястото им.*

