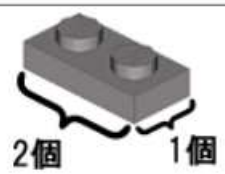
第23回全国専門学校ロボット競技会
自律型ロボット対戦競技「ソフトウェア部門」　ロボット組立図

このロボットを組立てるためには、
・制御チャレンジセット　（セット番号 NXTCCSET）
　　・教育用レゴマインドストーム NXT基本セット（セット番号 WRL9797,WRL9797V95,WRL9797V120）
　　・教育用レゴマインドストーム NXT拡張セット（セット番号 WRL9648,WRL9695）
さらに追加で
・光センサ（商品型番　WPT9844）
・カラーセンサ（商品型番　WPT9694）LEGO社製
が必要です

※ポッチの数え方とシャフトの長さの測り方

■ポッチの数え方



プレート1×2

■シャフトの長さの測り方

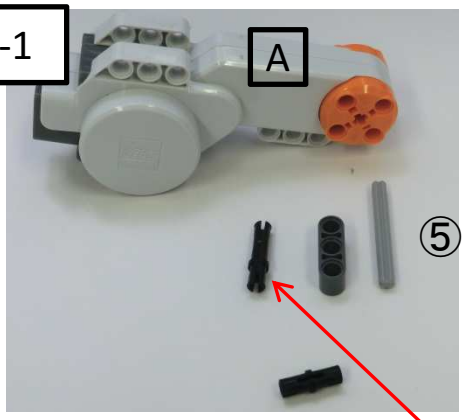
ポッチの数が4個なのでシャフトの長さは
④

※基本セットのバージョンアップに伴い、パーツの色が変更されているものがあります。形が同じものであれば、
　組立図と色が違っていても構いません。

例)

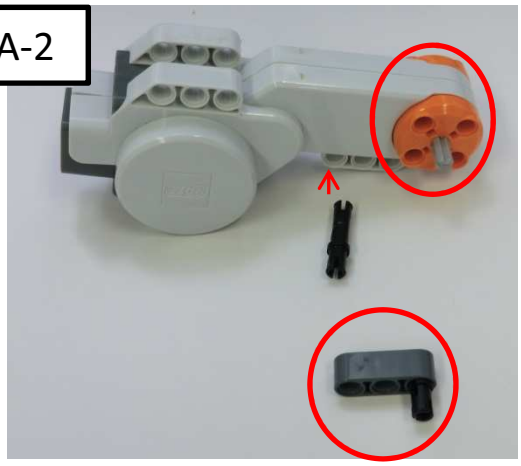
A:ベースの作成

A-1



1個目のモータAを用意
（セットによっては、青色になります。）

A-2



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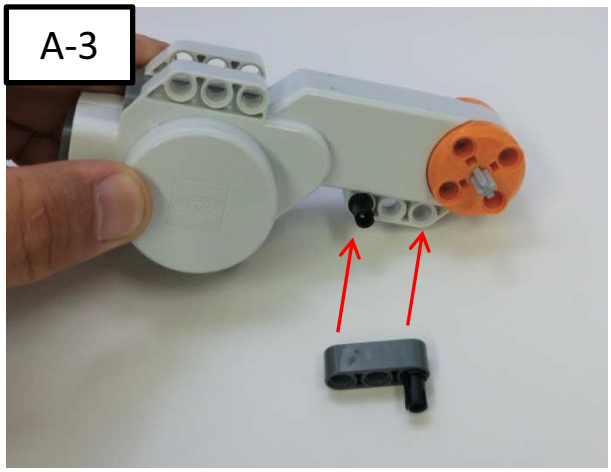

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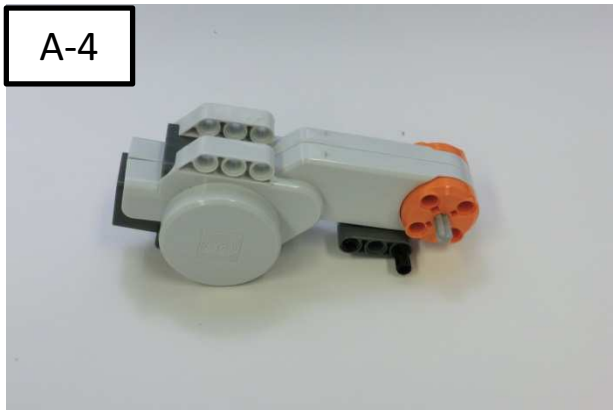

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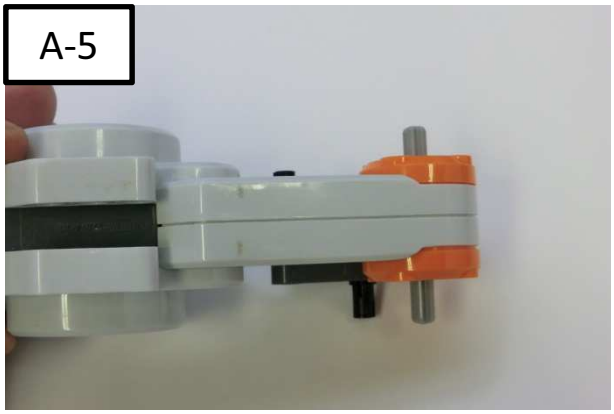

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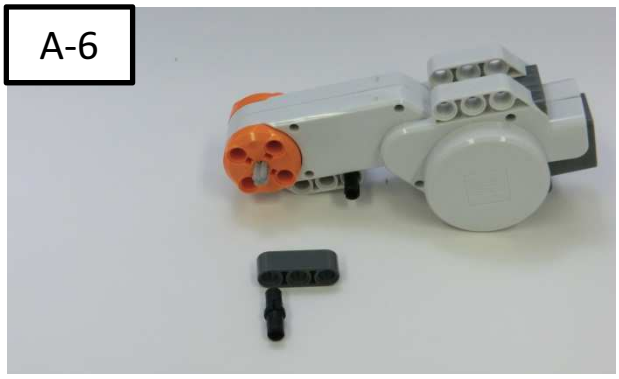
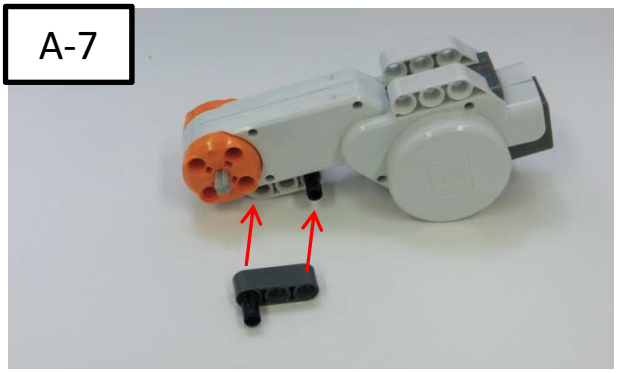


A:ベースの作成

A-7



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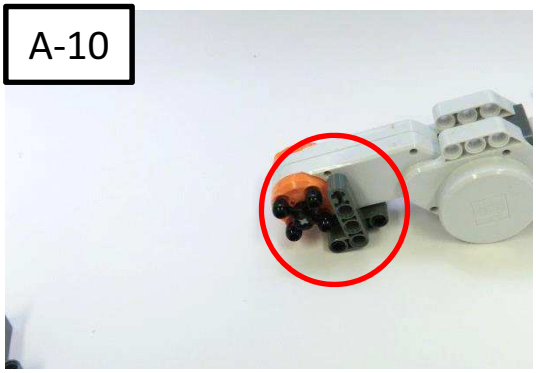

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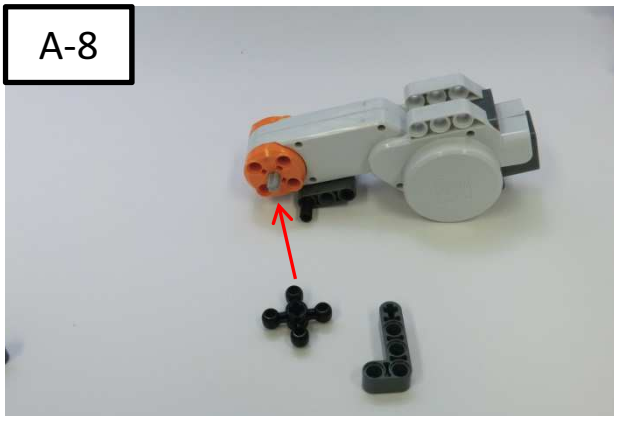

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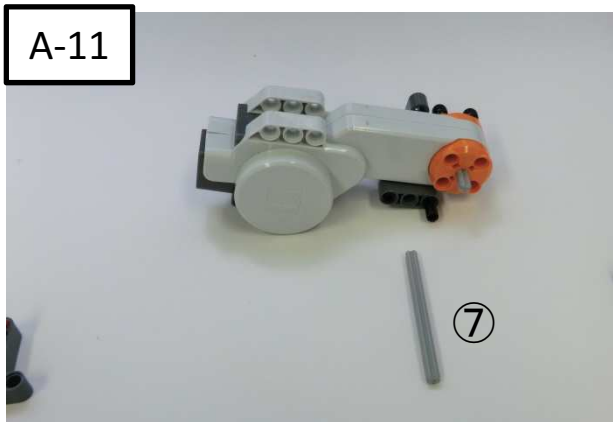

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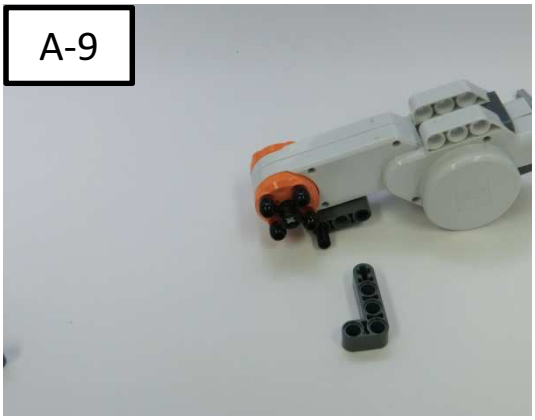

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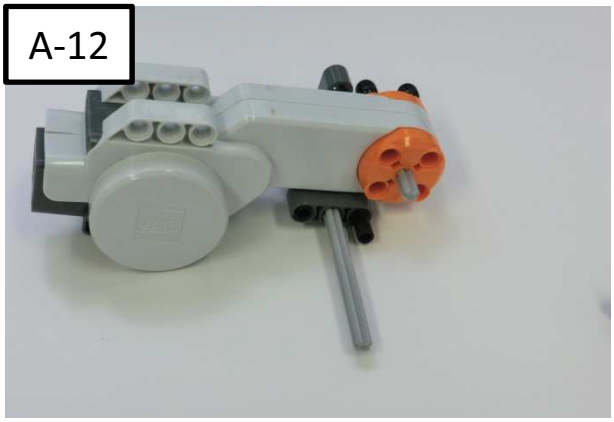
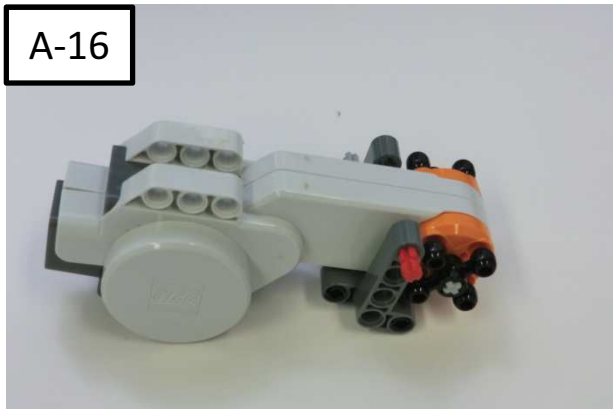


A:ベースの作成

A-13

A-16



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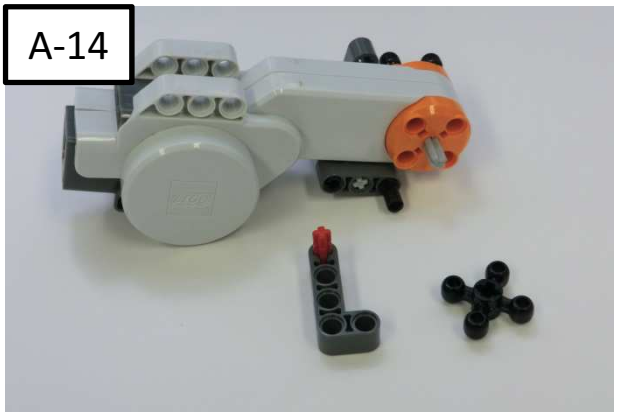
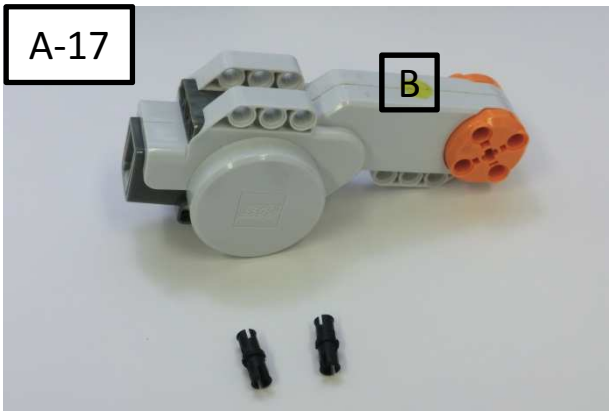
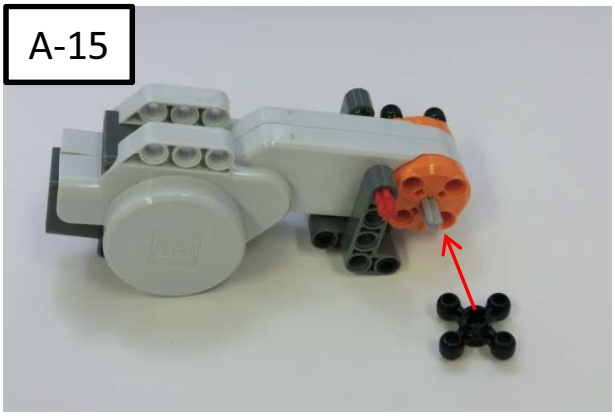


A-17

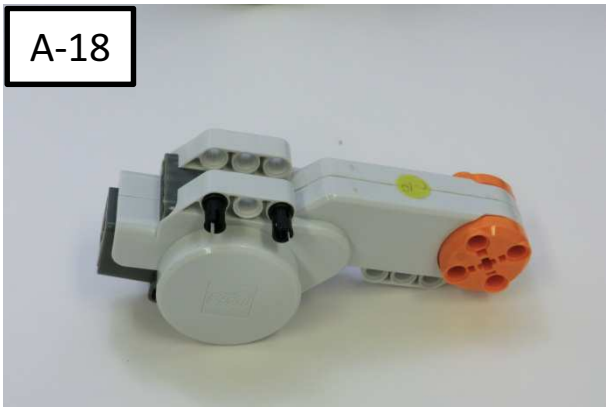


2個目のモータBを用意

A-15

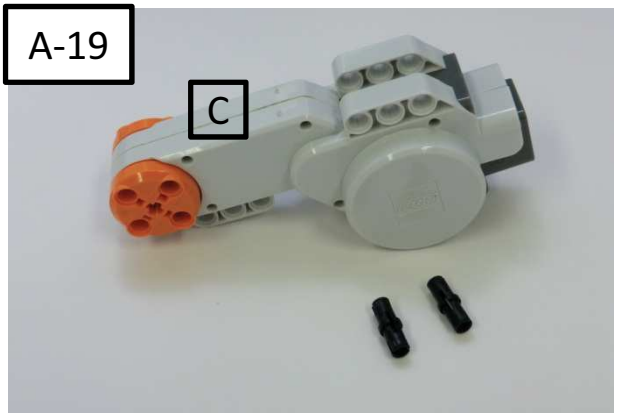


A-18

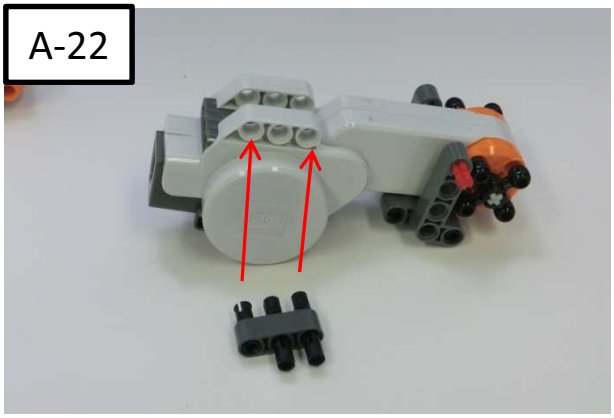


A:ベースの作成

A-19

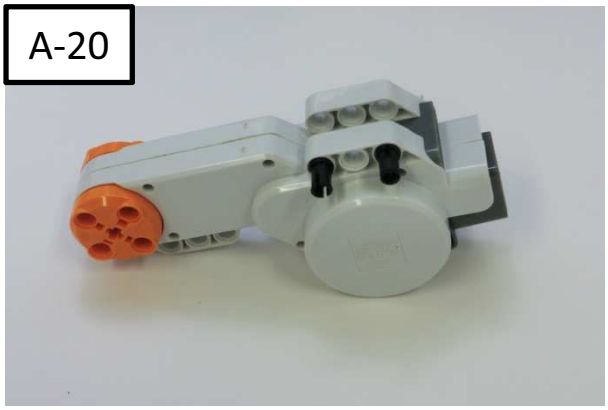


A-22



3個目のモータCを用意

A-20



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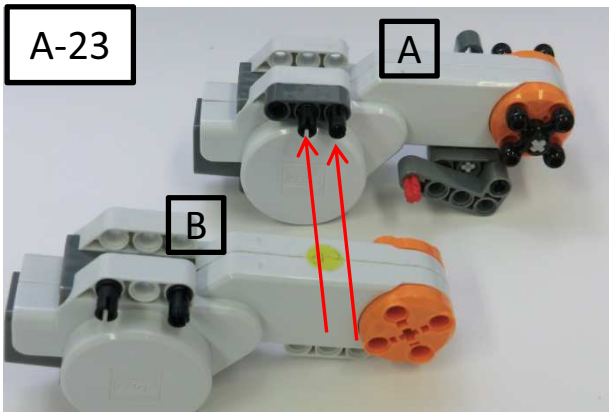

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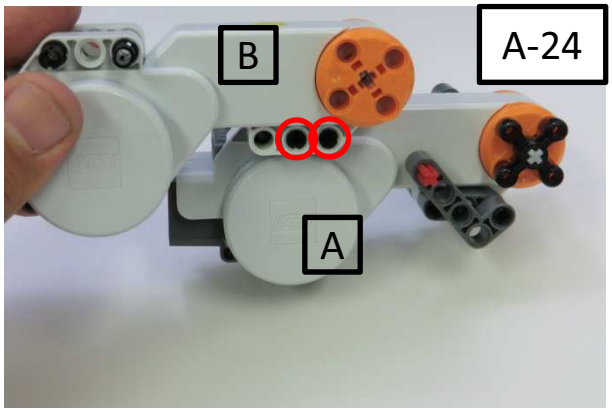
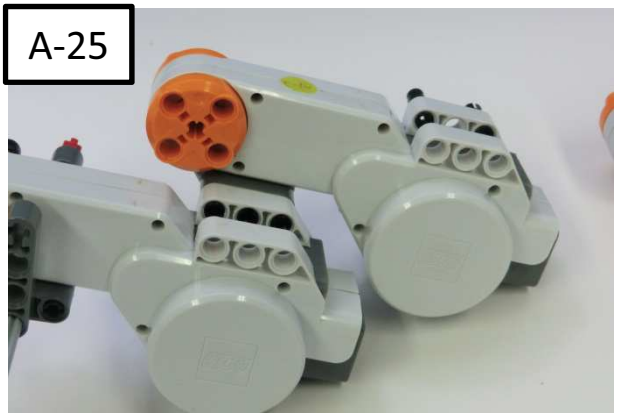
A-24



A:ベースの作成

A-25

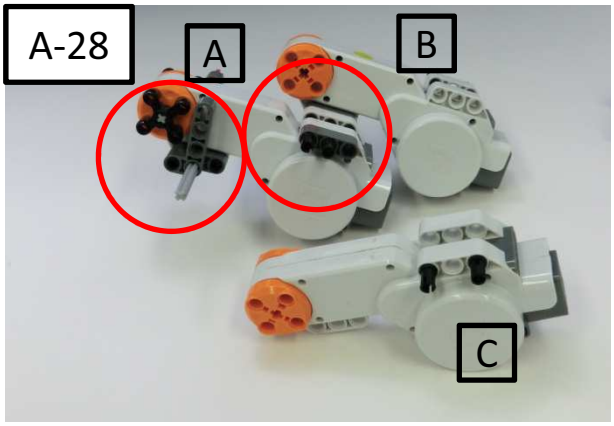


反対から見る

A-26

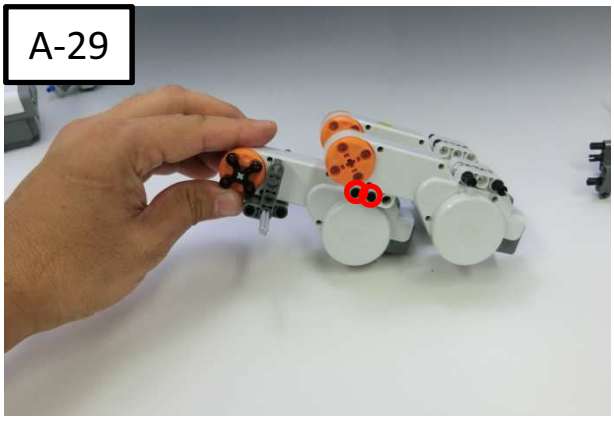
A-27

A-28



シャフトも通す

A-29



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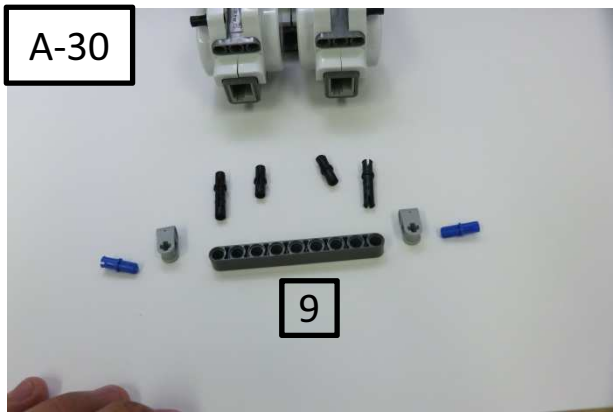
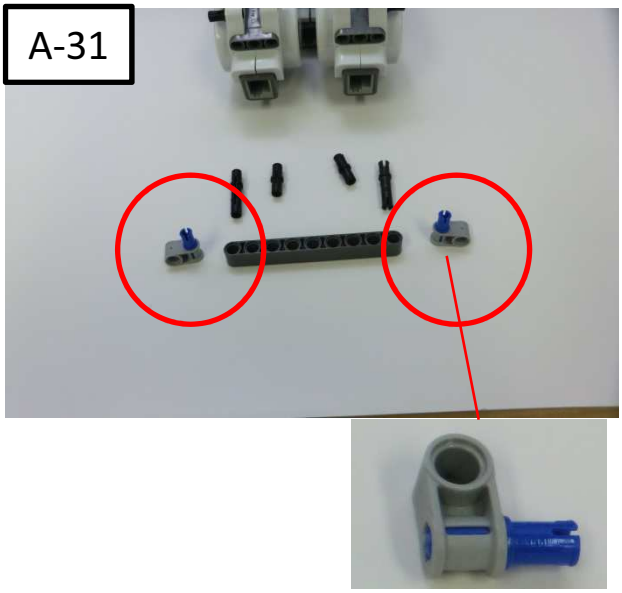


A:ベースの作成

A-31



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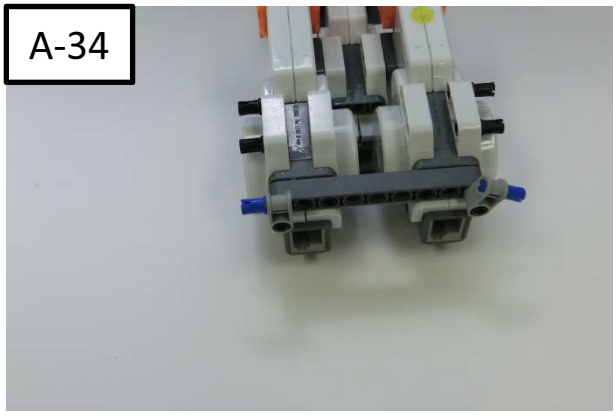

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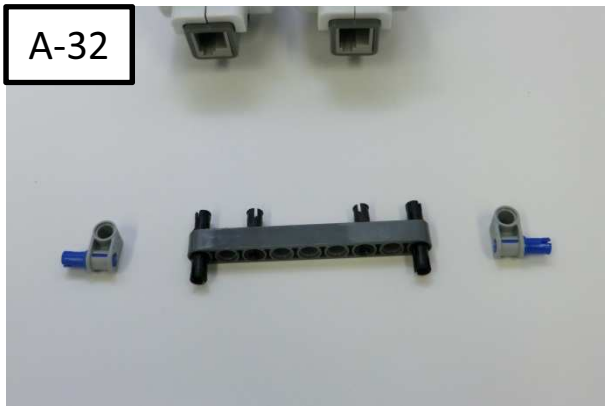
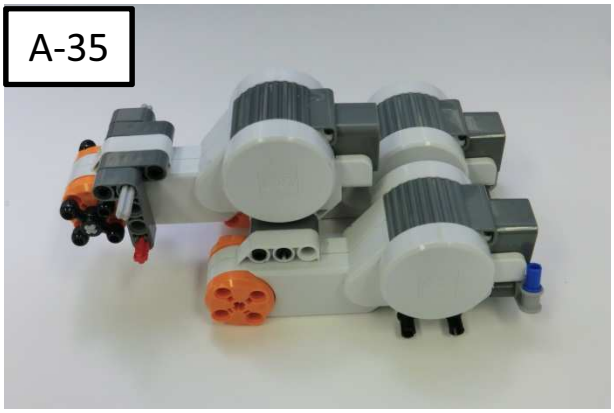


A-35



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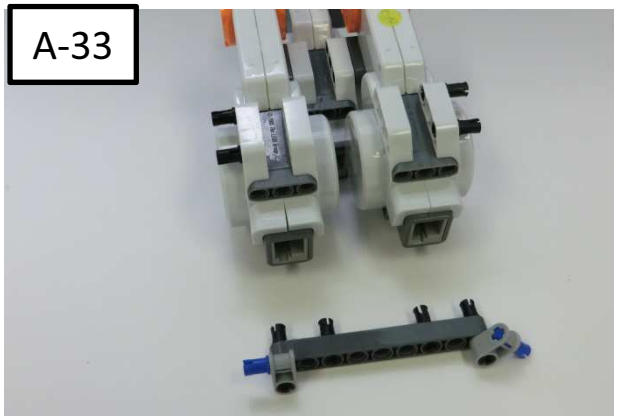
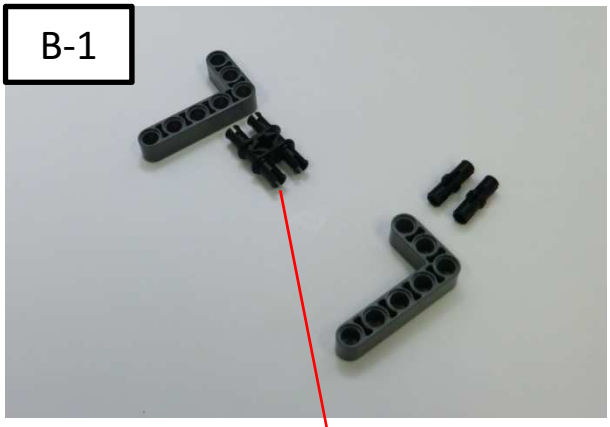


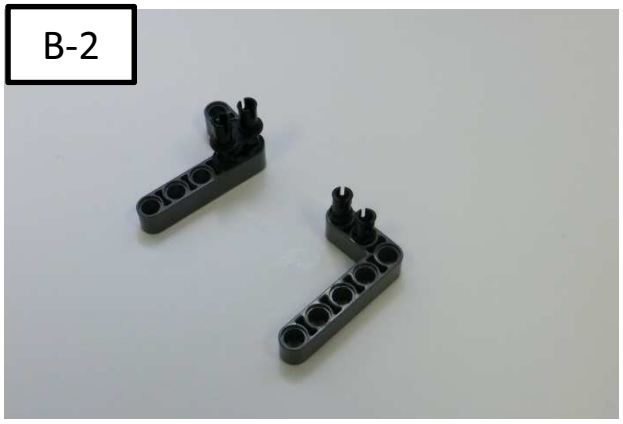
B:ツメの作成

B-1



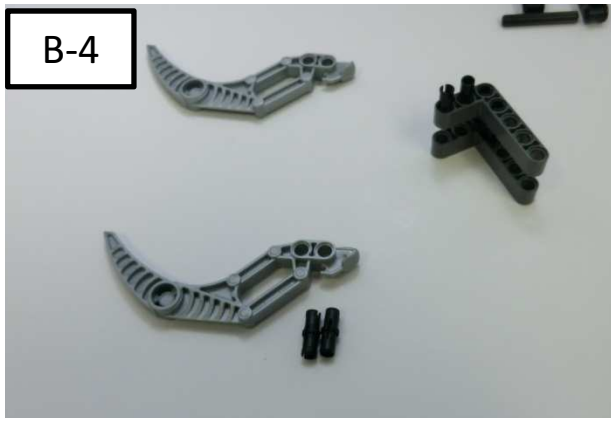
左ツメ作成

B-2



B-3

B-4



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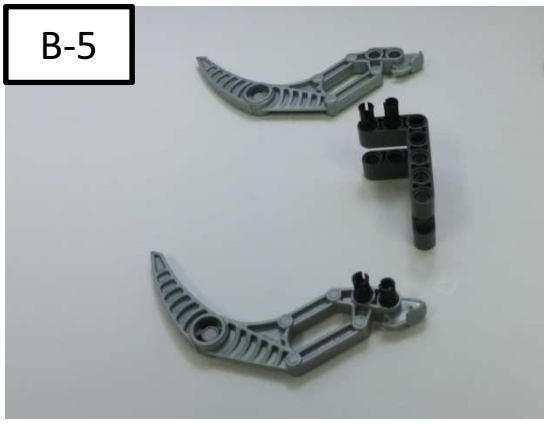

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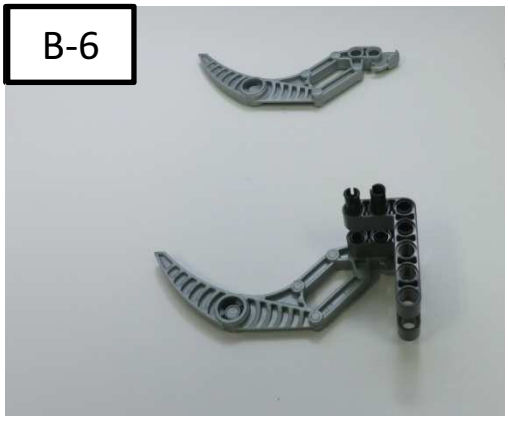
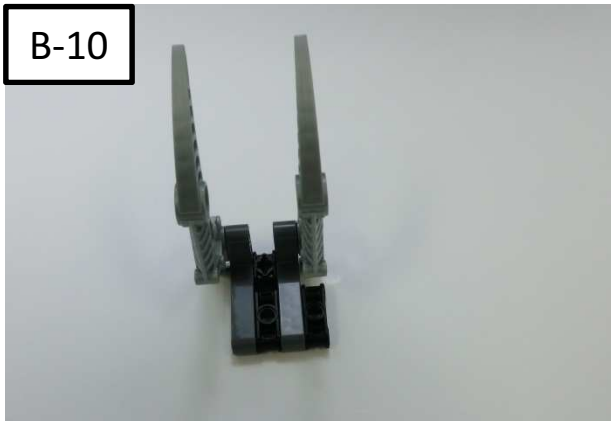


B:ツメの作成

B-7

B-10



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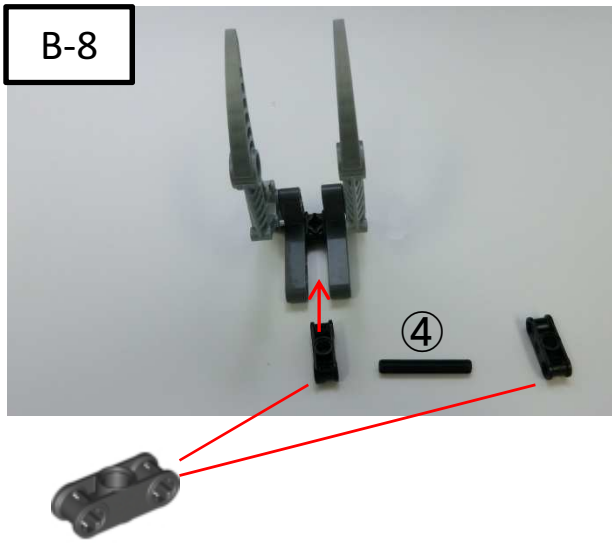

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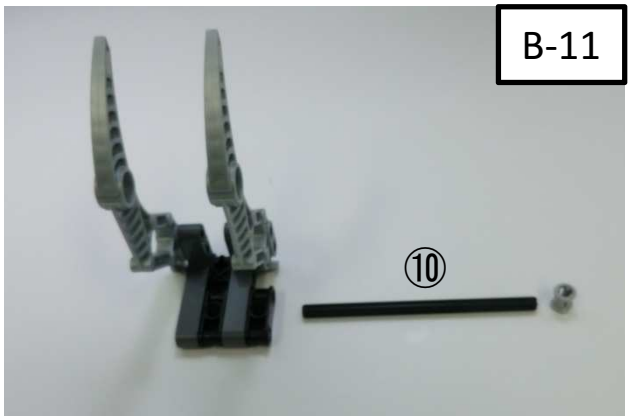

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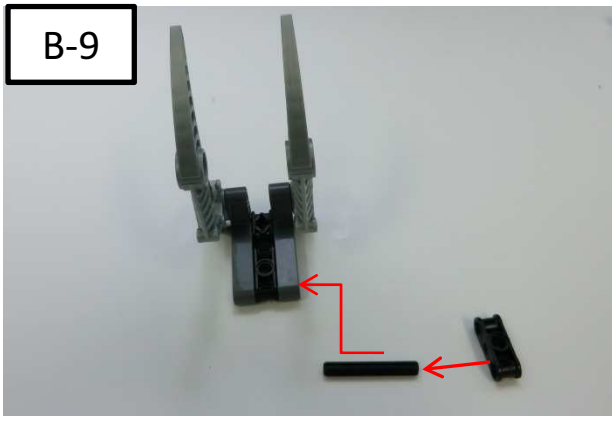

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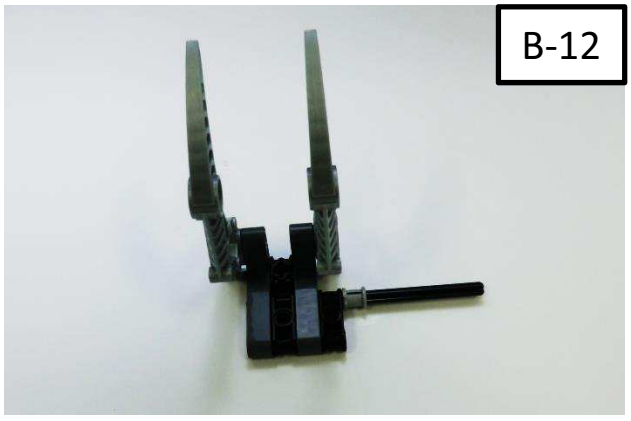
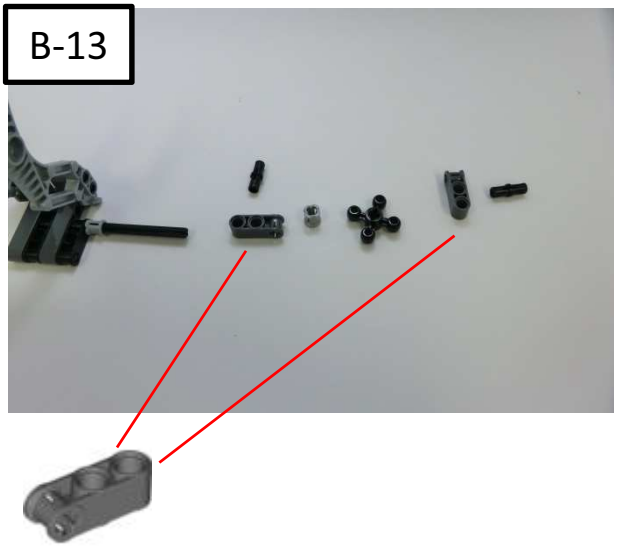
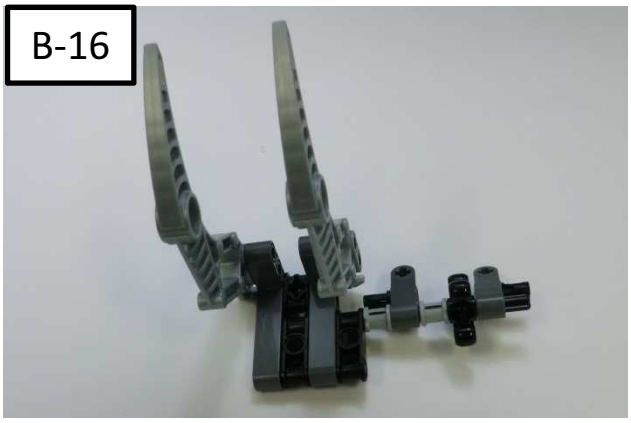


B:ツメの作成

B-13

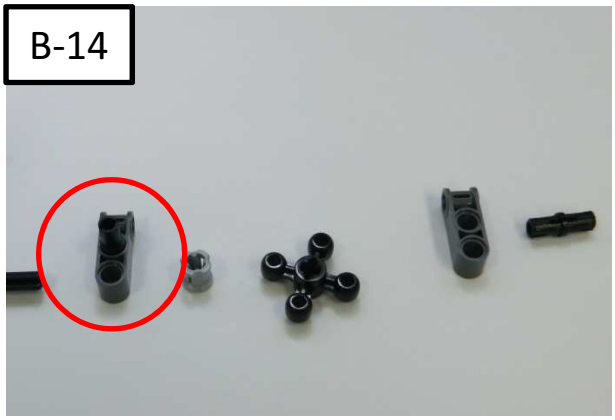


B-16



左ツメ完成

B-14



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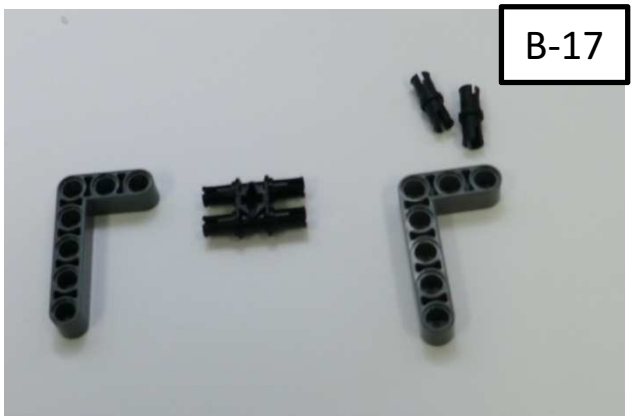
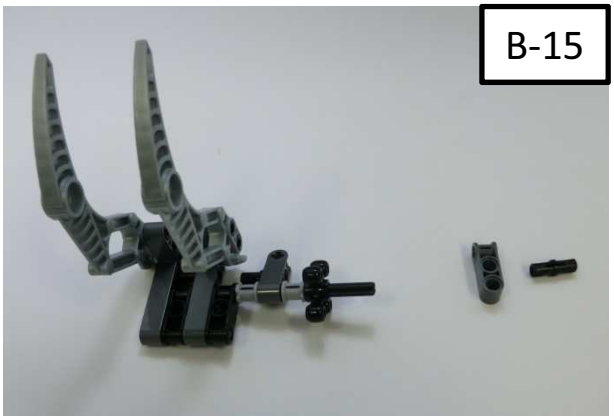


右ツメ作成

B-15



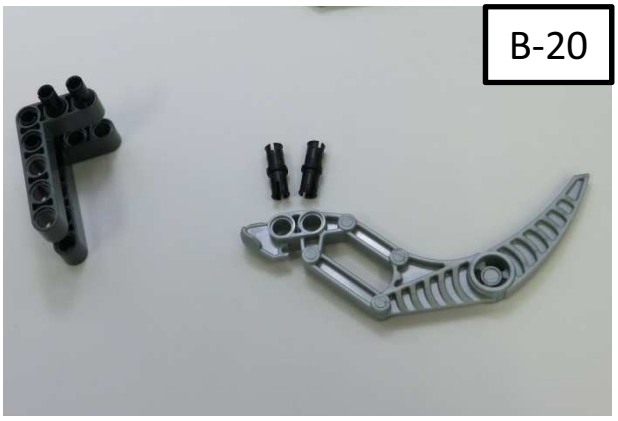
B-18

B:ツメの作成

B-19

B-22

B-20



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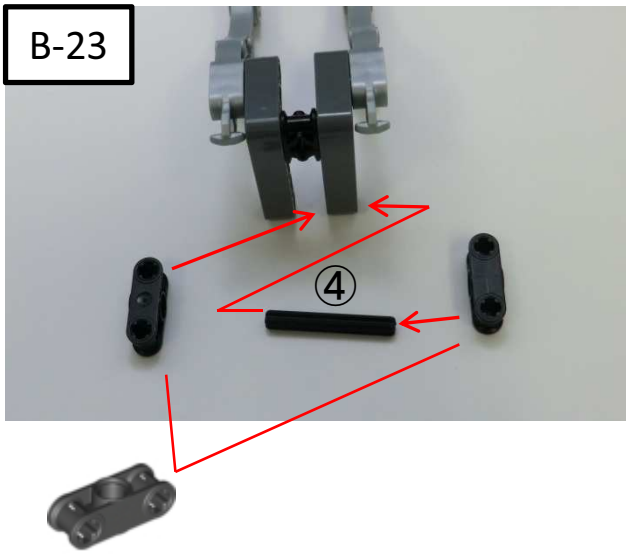

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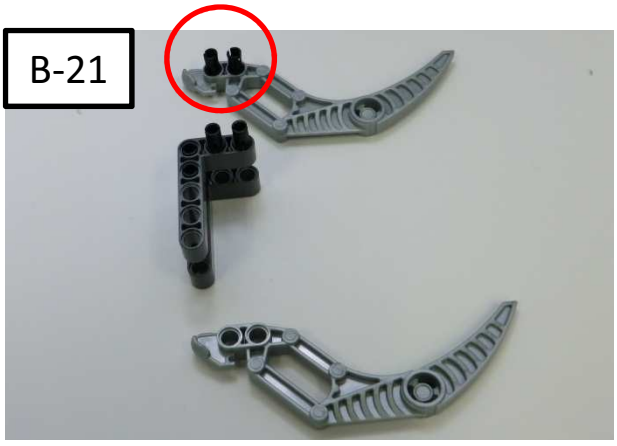

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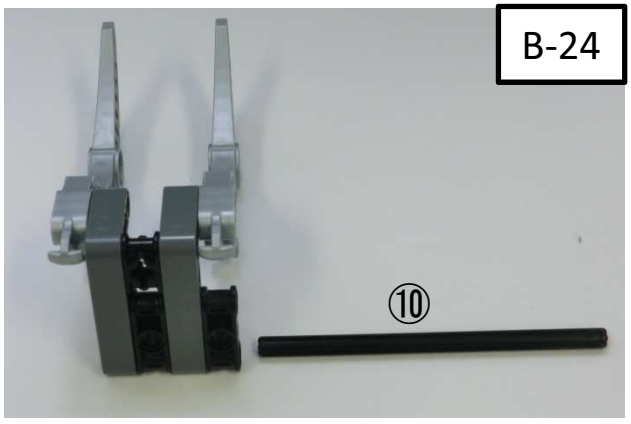
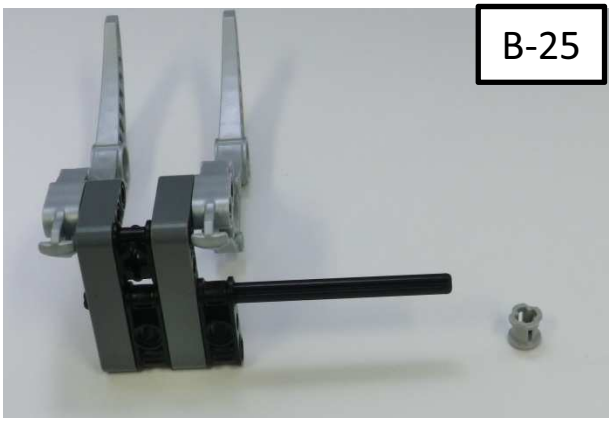


B:ツメの作成

B-25



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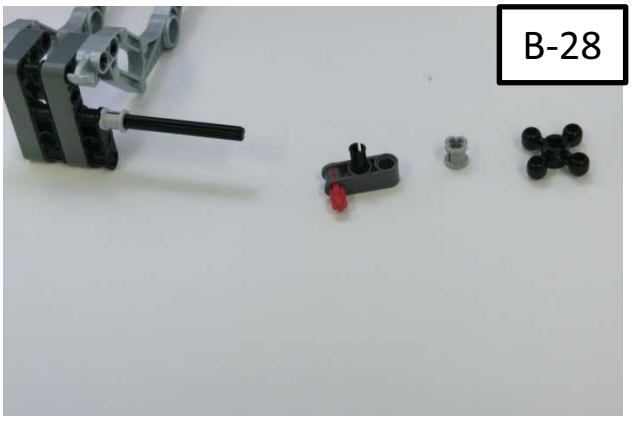

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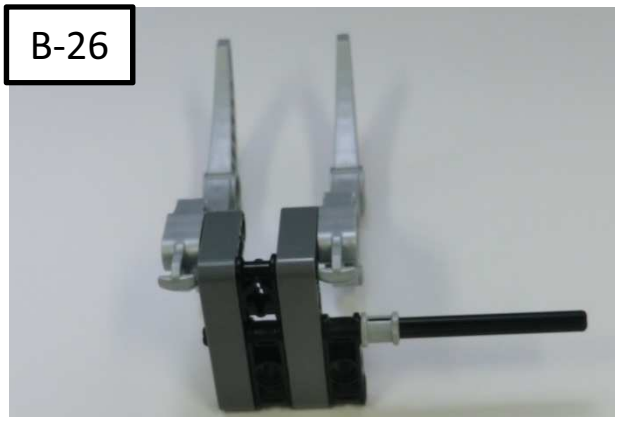

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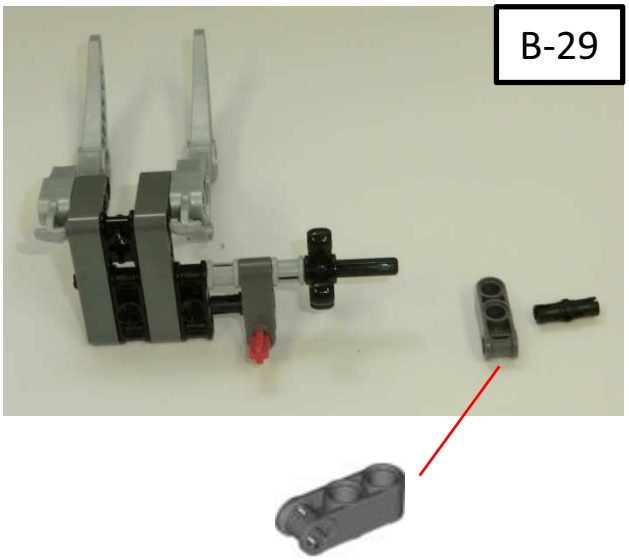
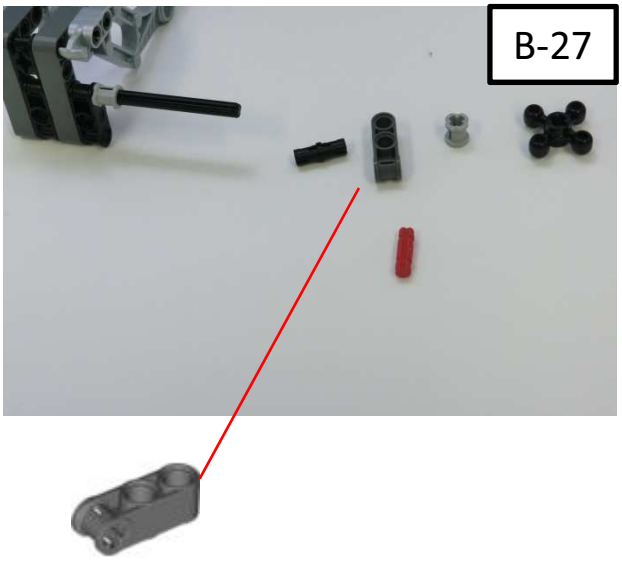
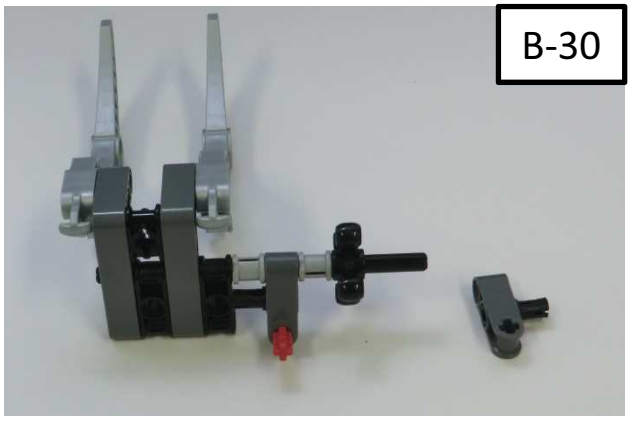


B-27

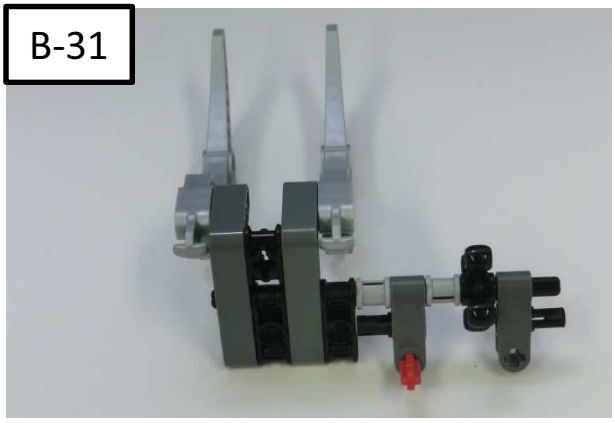


B-30



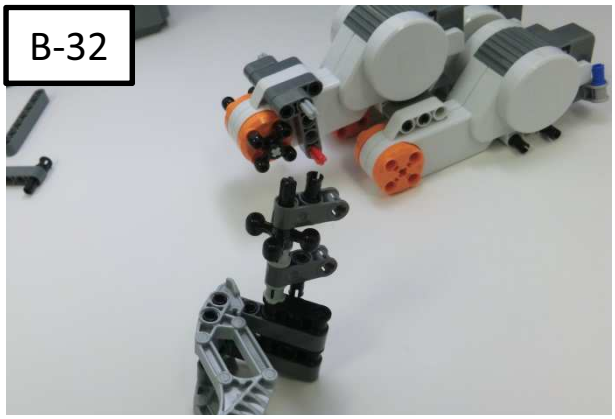
B:ツメの作成

B-31



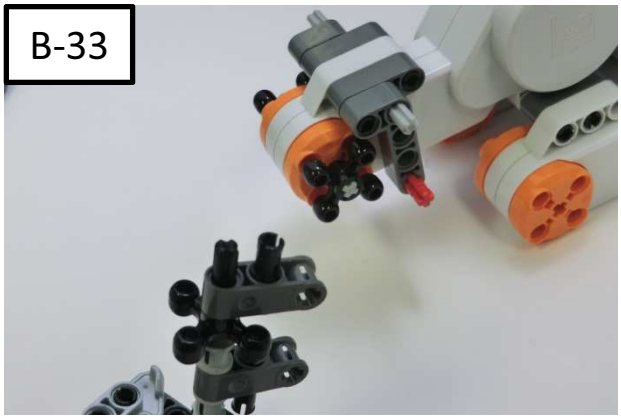
右ツメ完成

B-32

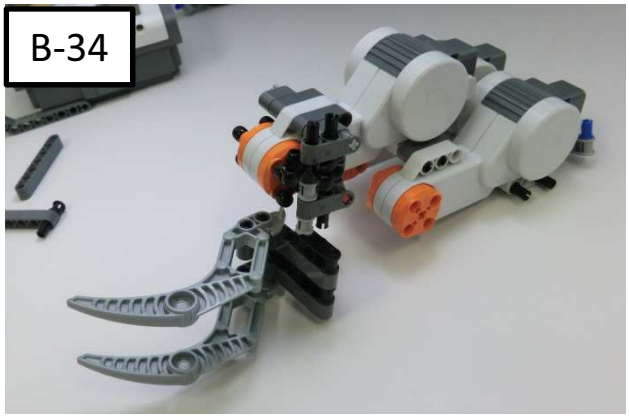


左ツメを取り付けます。

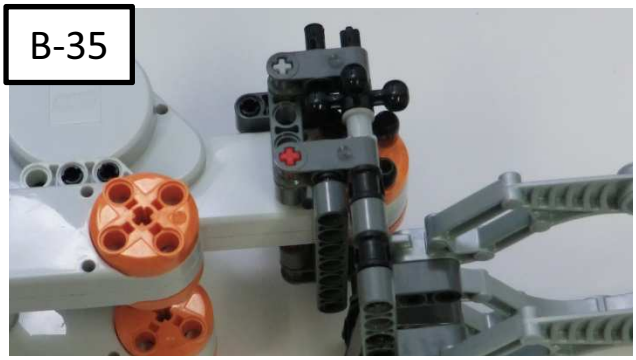
B-33



B-34

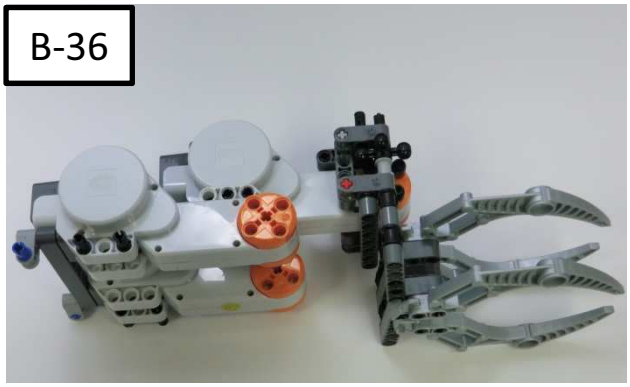


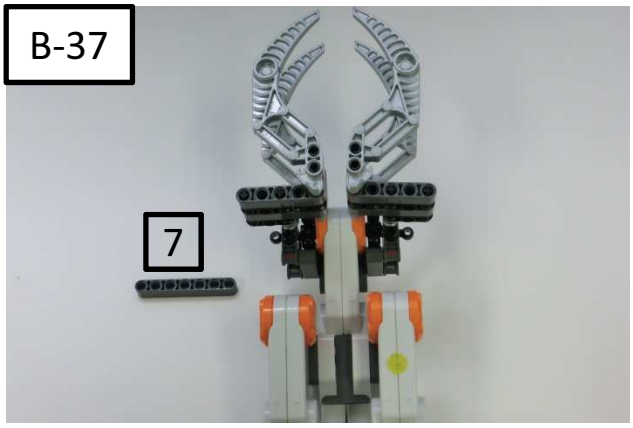
B-35

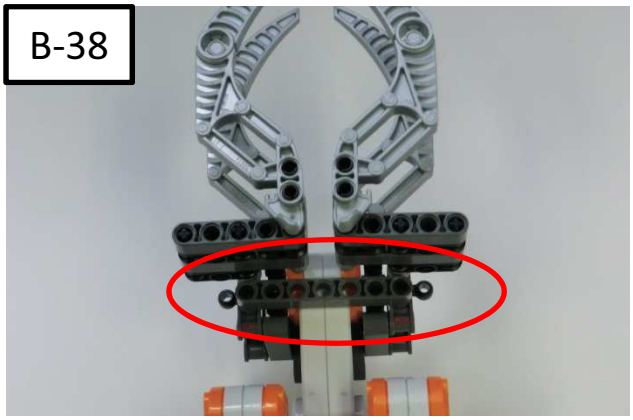


右ツメも取り付けます。

B-36

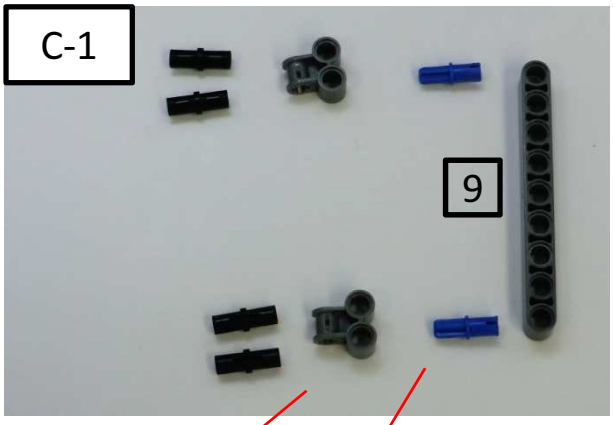




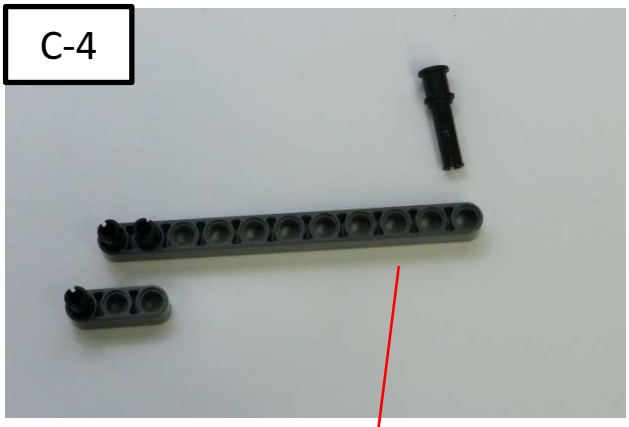


C:ブリッジの作成

C-1

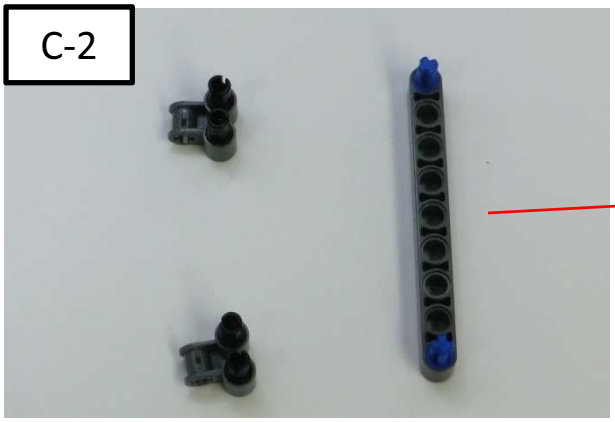


C-4

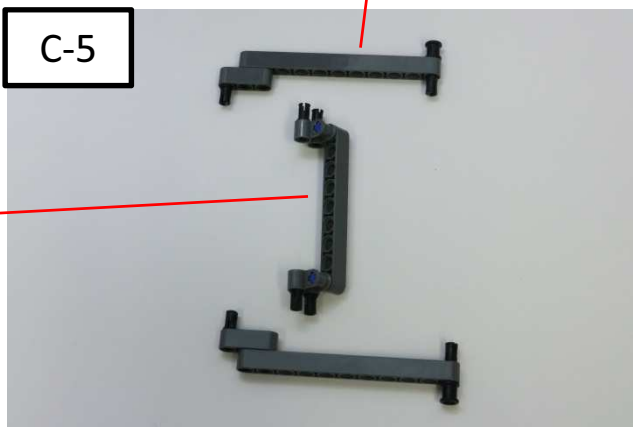


同じものをもう1個作ります

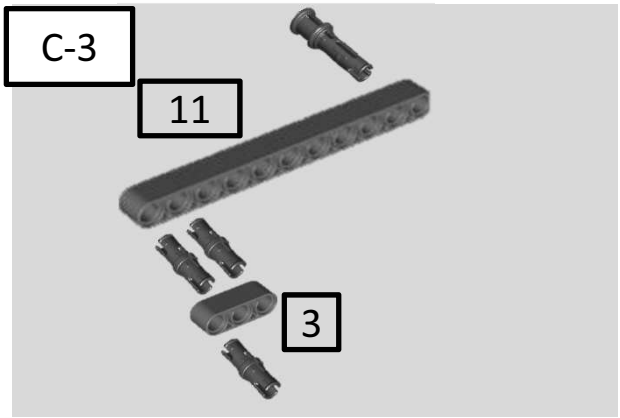
C-2



C-5



C-3



D:後輪・前輪の作成

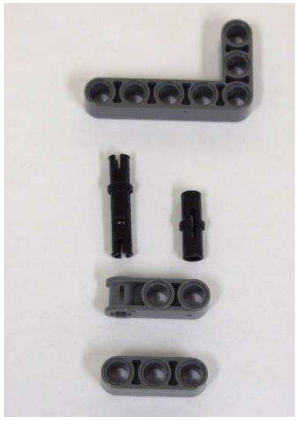
D-1

D-4

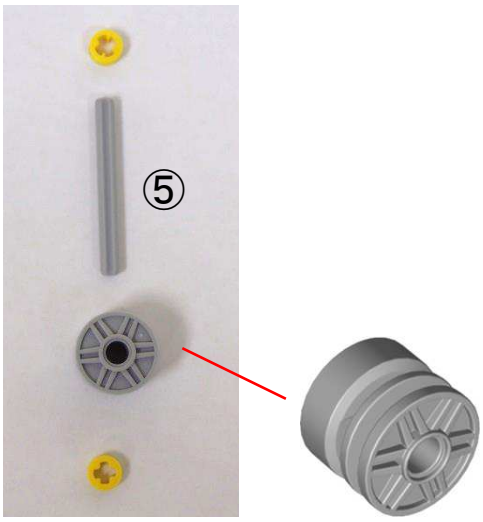
後輪の作成

D-2

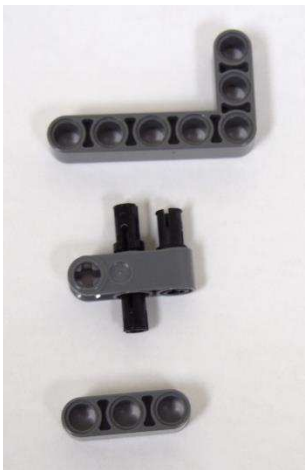
D-5



D-3



D-6

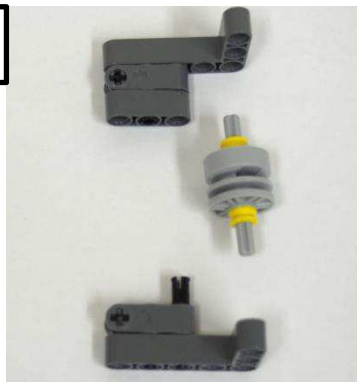


D:後輪・前輪の作成

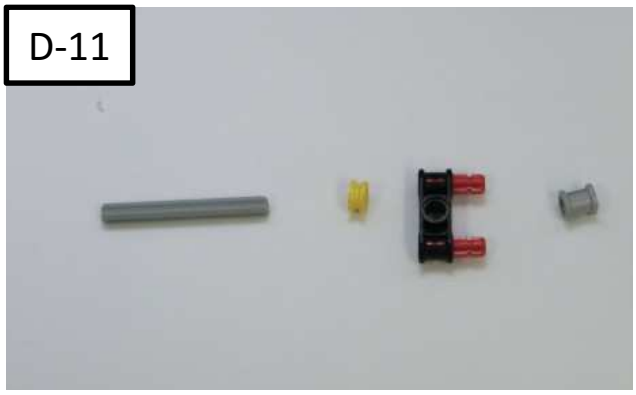
D-7

D-10

D-8



D-11

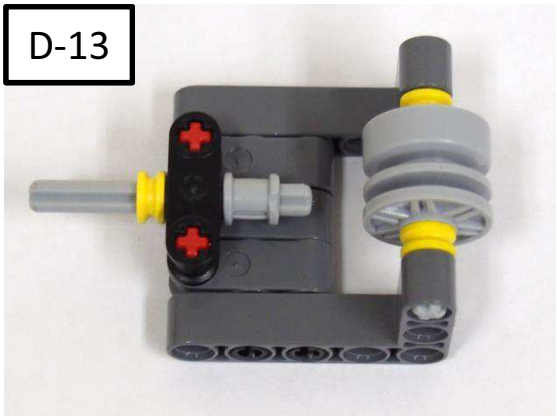


D-9

D-12

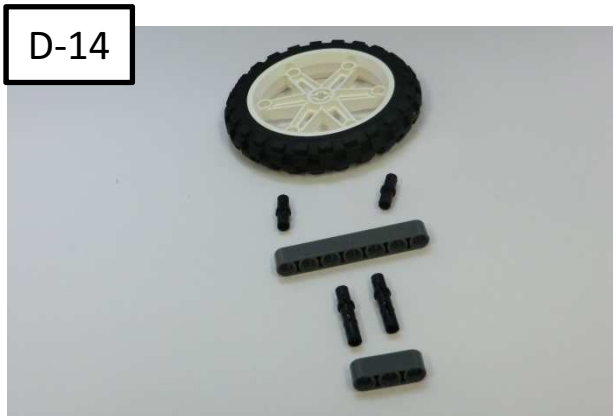
D:後輪・前輪の作成

D-13



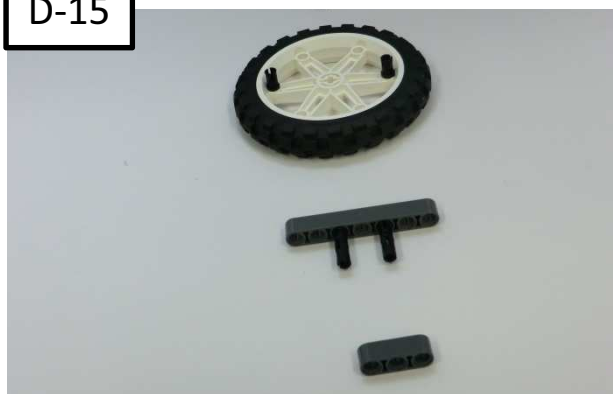
後輪の完成

D-14

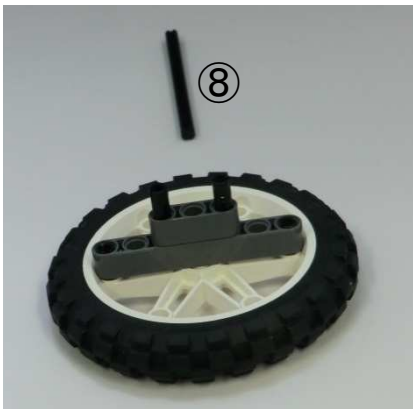


前輪の作成

D-15



D-16

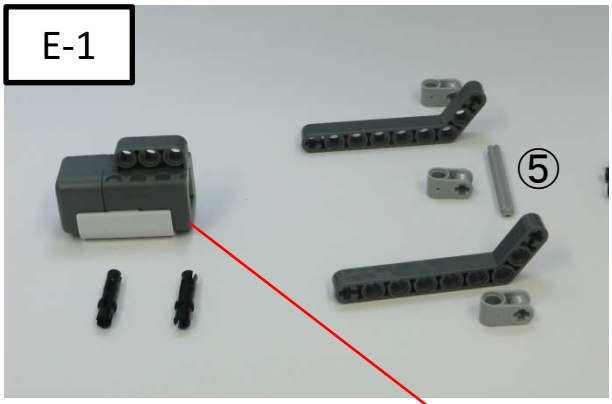


D-17

同じものをもう1個作ります

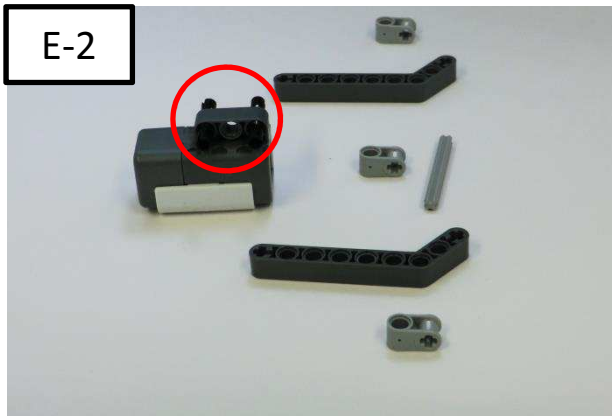
E:各センサーの作成

E-1

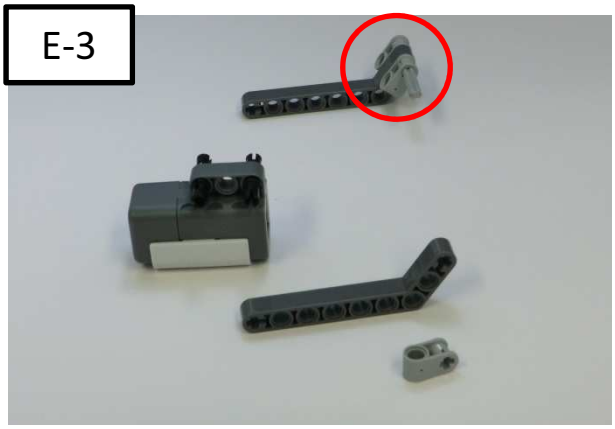


カラーセンサーの作成

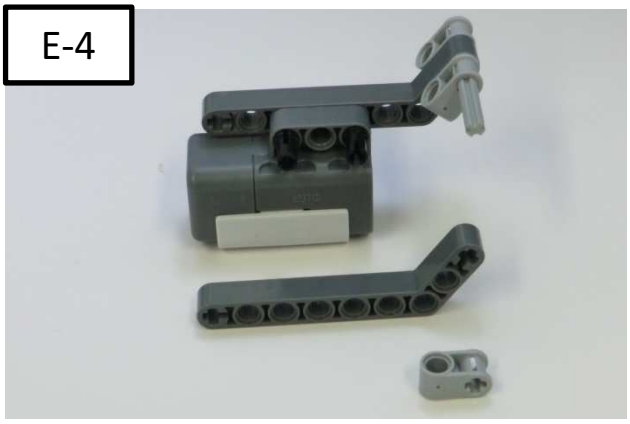
E-2



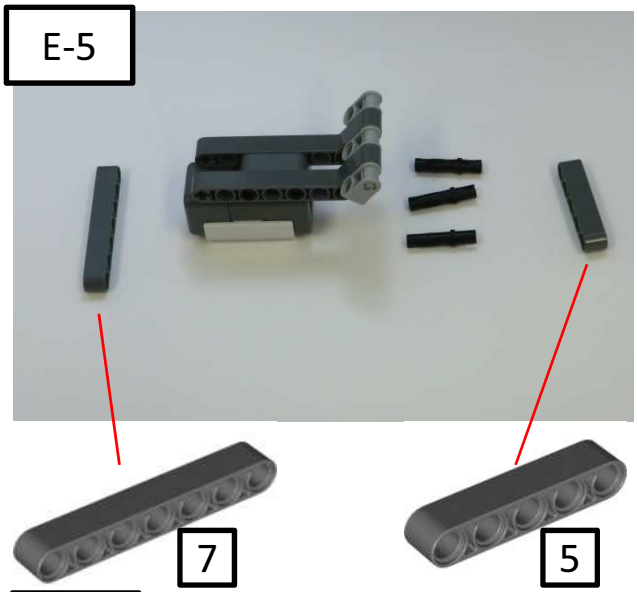
E-3



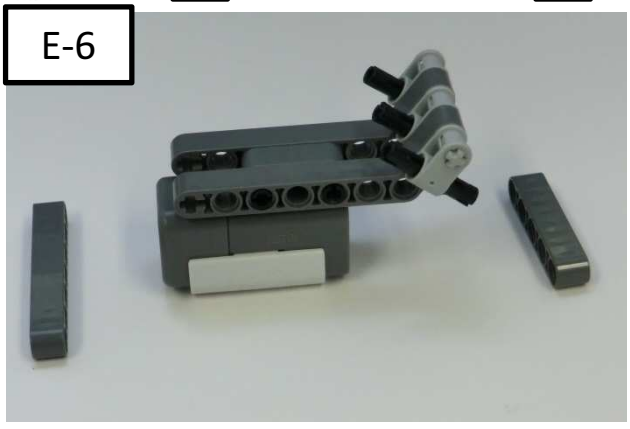
E-4



E-5

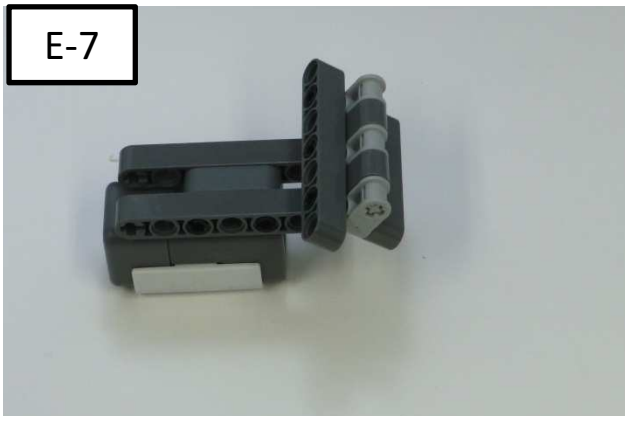


E-6

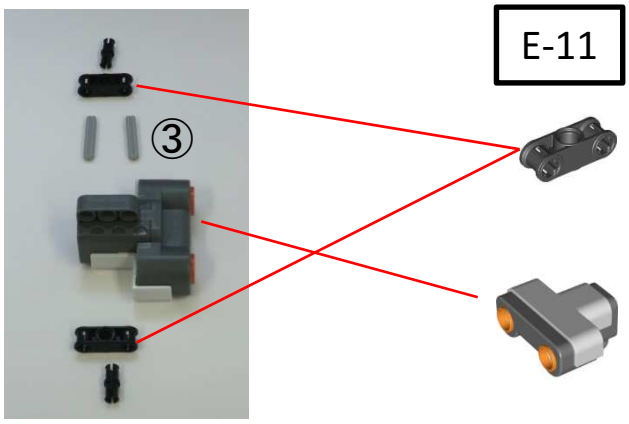


E:各センサーの作成

E-7

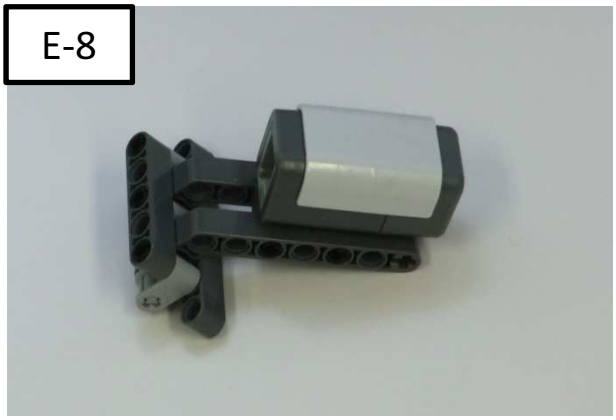


E-11



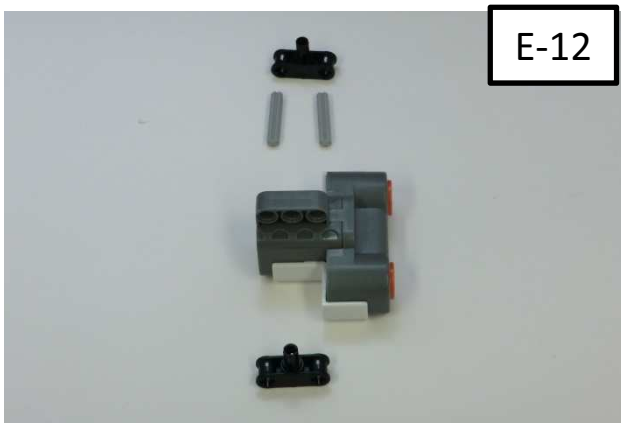
超音波センサの作成

E-8

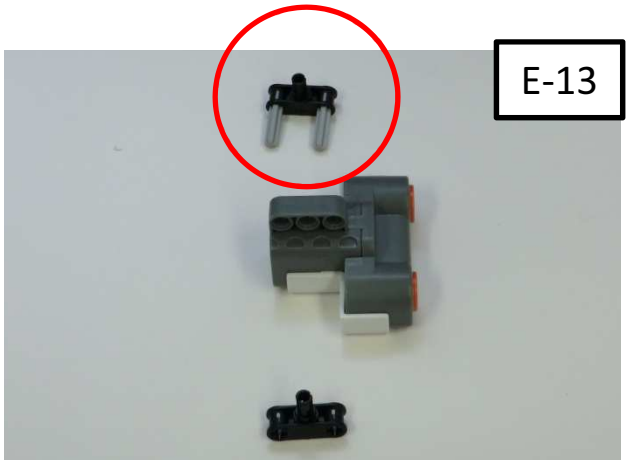


カラーセンサーの完成

E-12

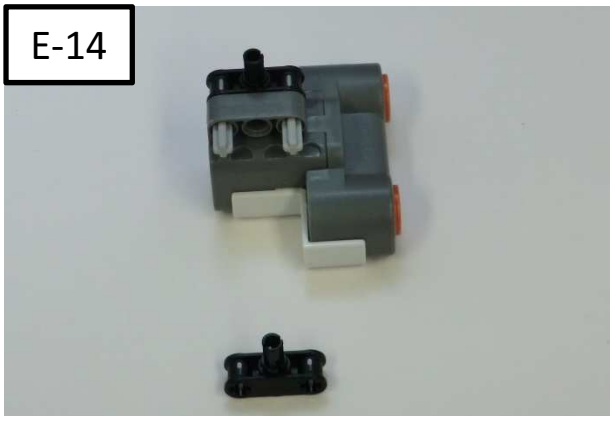


E-13

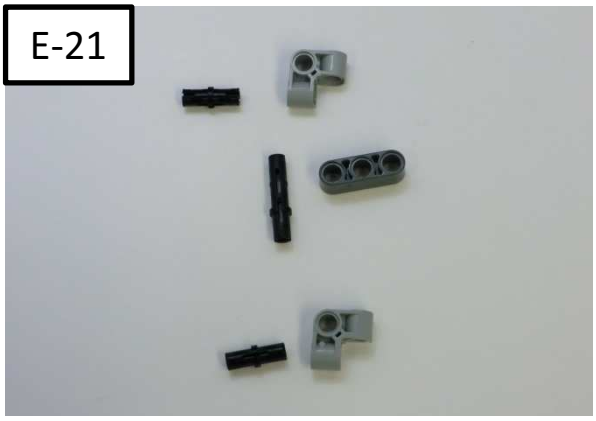


E:各センサーの作成

E-14

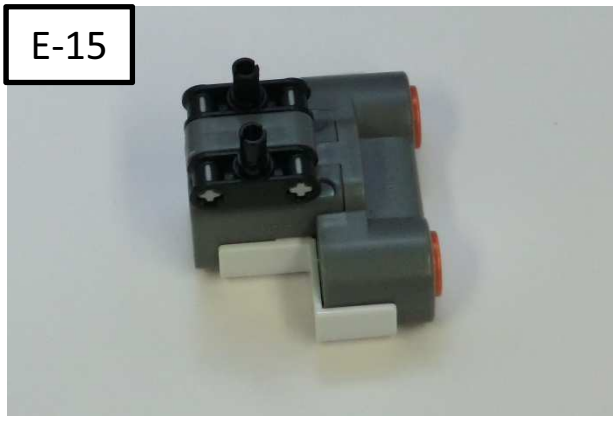


E-21



ダブル光センサーの作成

E-15



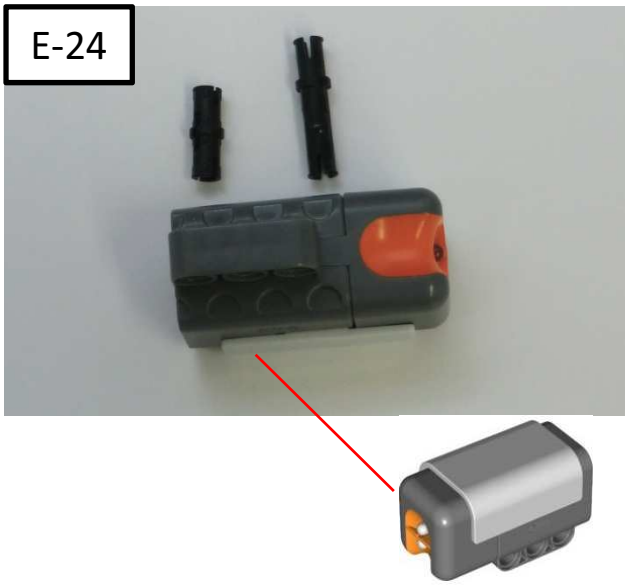
超音波センサーの完成

E-22

E-23

E:各センサーの作成

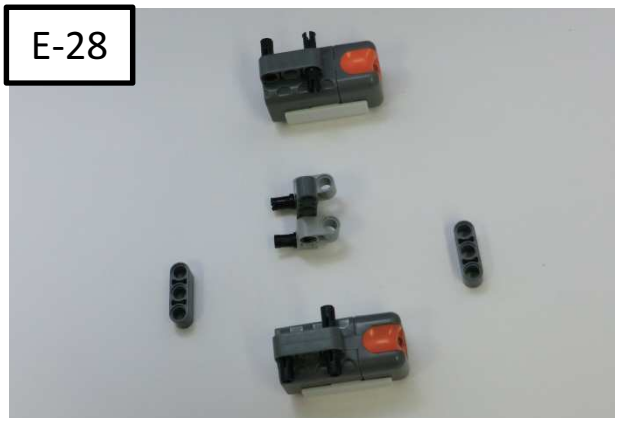
E-24



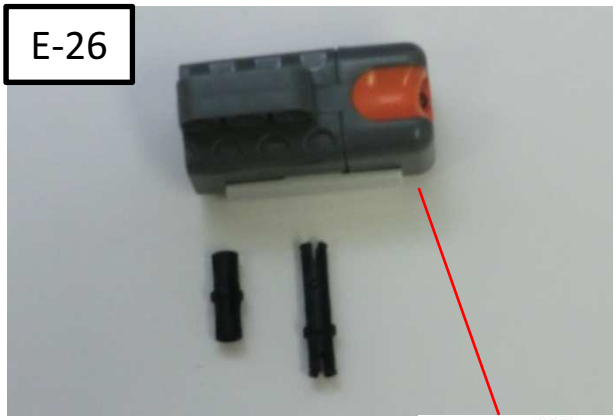
E-27

E-25

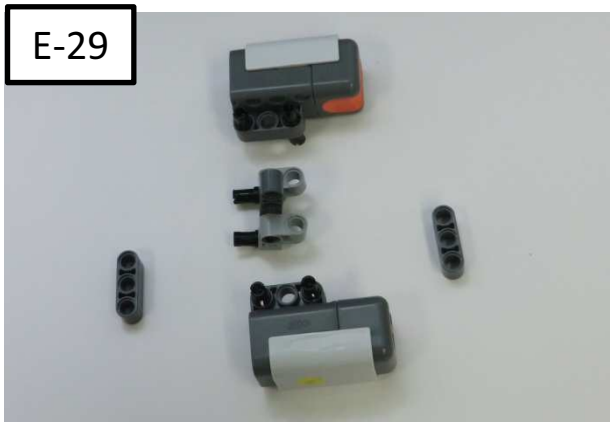
E-28



E-26



E-29

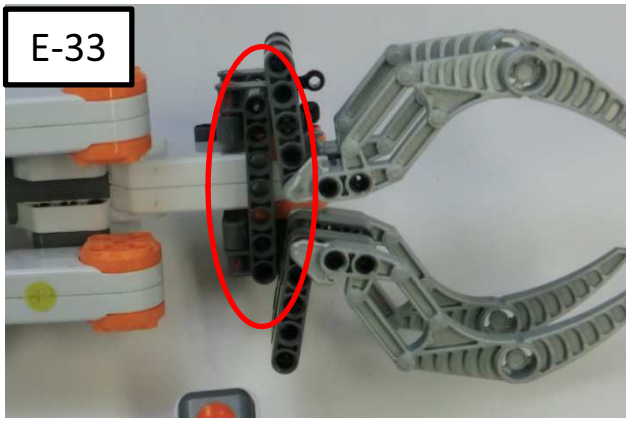


2つ目の光センサ

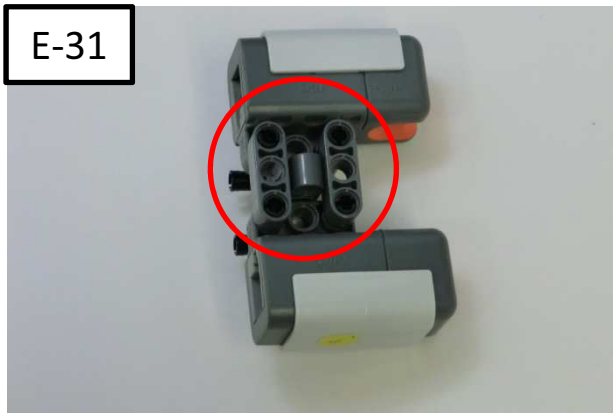
E:各センサーの作成

E-30

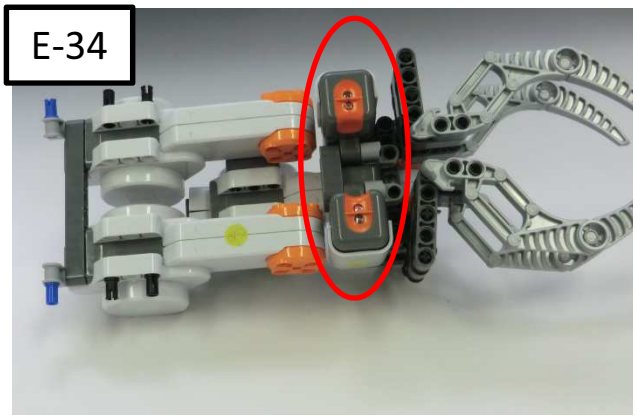
E-33



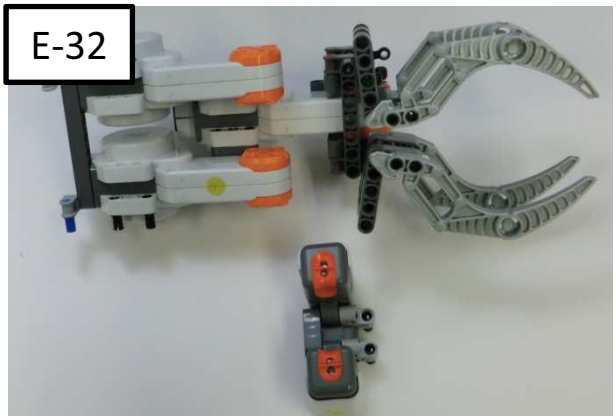
E-31



E-34

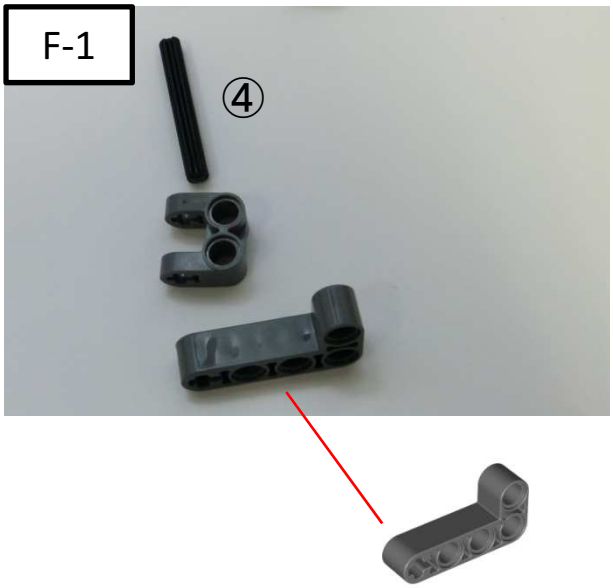


E-32



F:後ろバンパーの作成

F-1

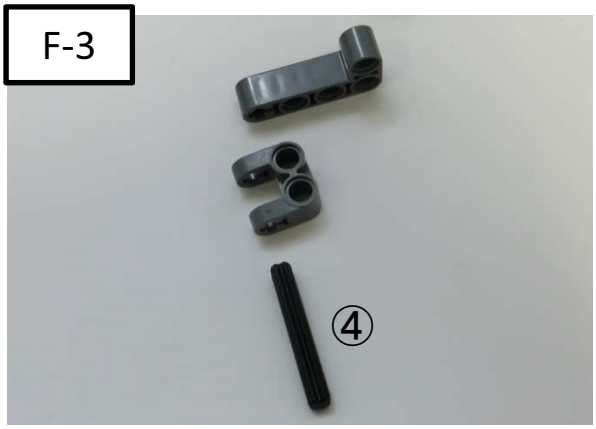


F-4

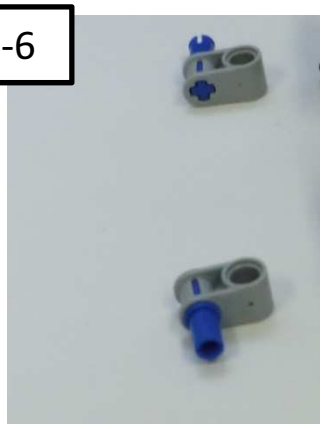
F-2

F-5

F-3

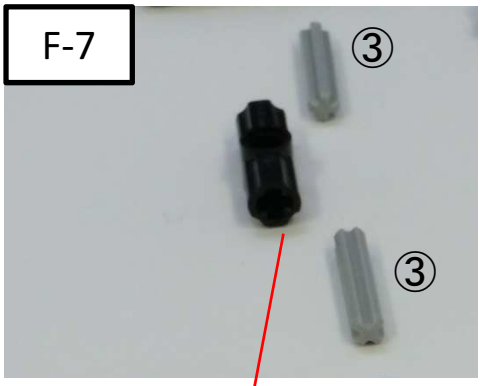


F-6

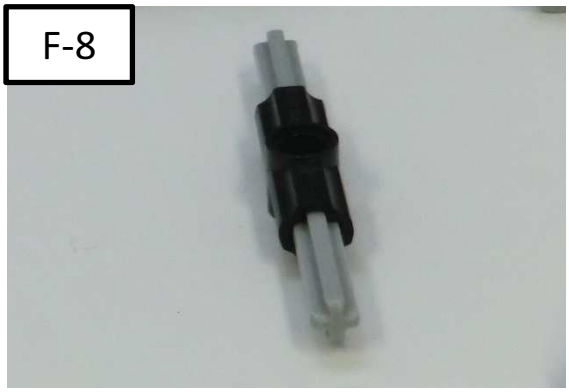


F:後ろバンパーの作成

F-7



F-8

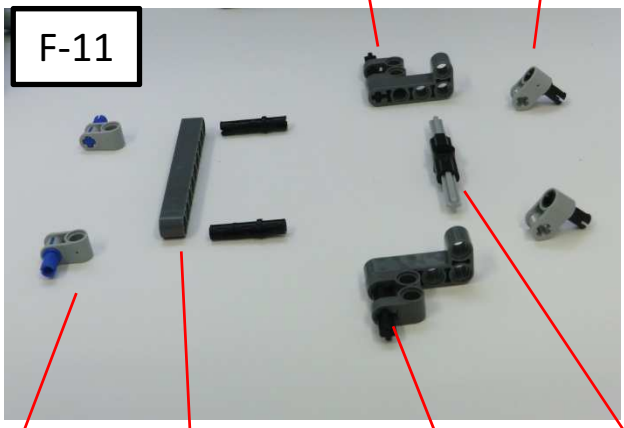


F-9

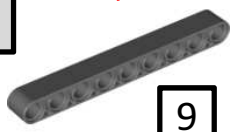
F-10

F-2　F-10

F-11

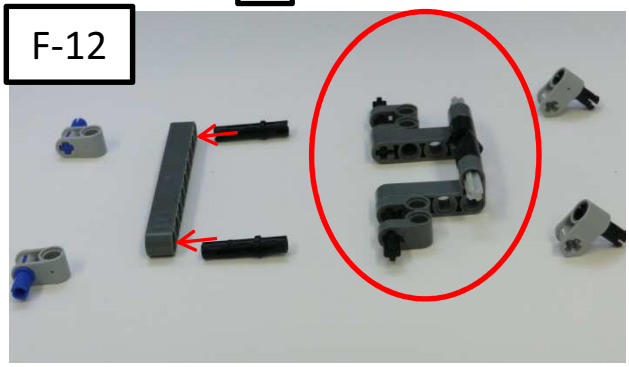


F-6　F-4　F-8



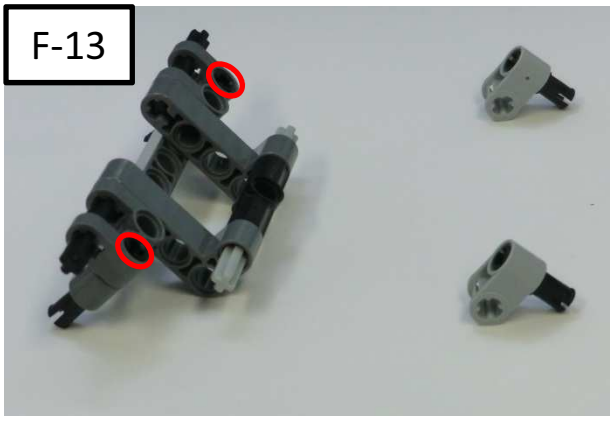
9

F-12

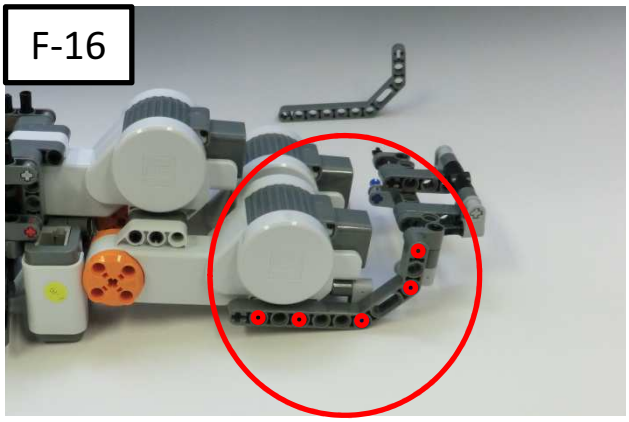


F:後ろバンパーの作成

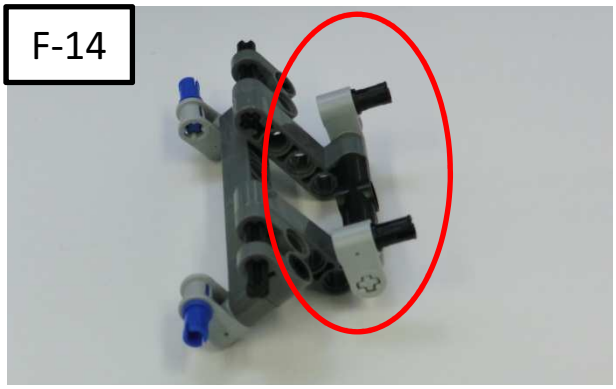
F-13



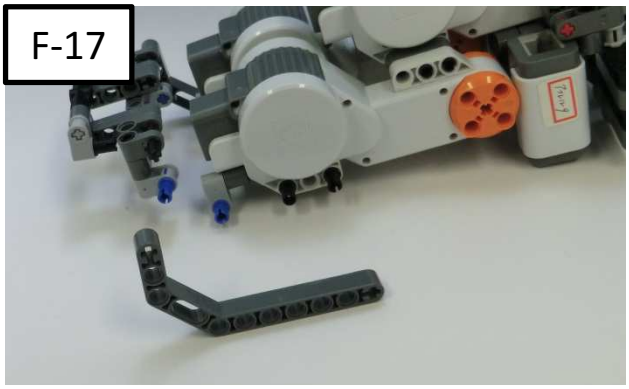
F-16



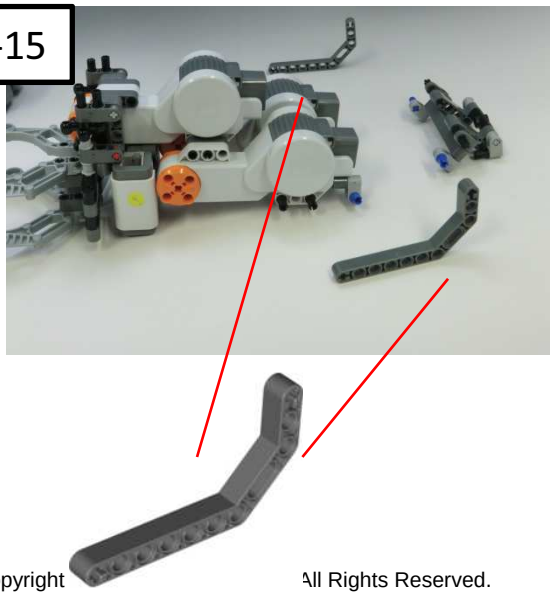
F-14



F-17



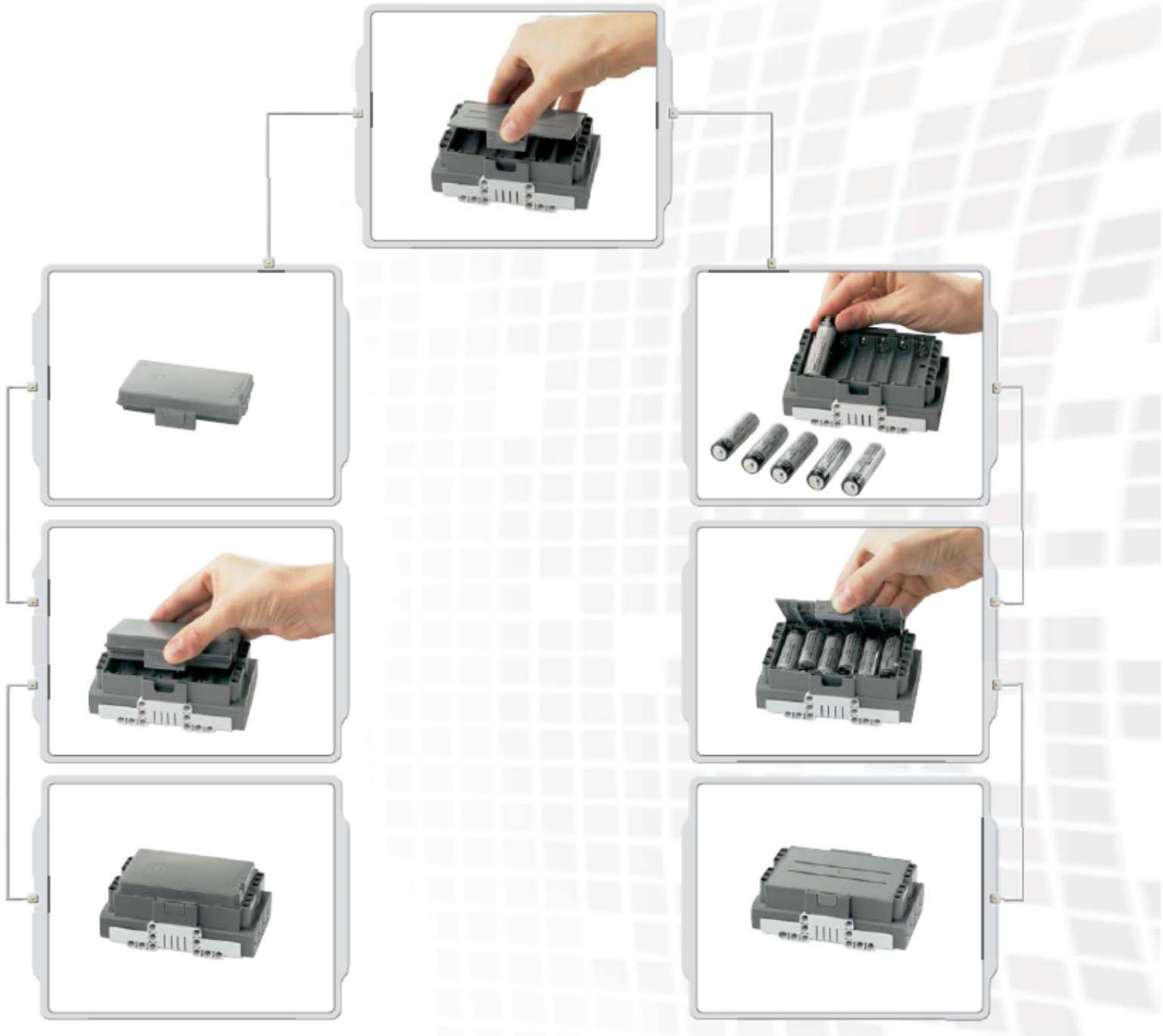
F-15



F-18

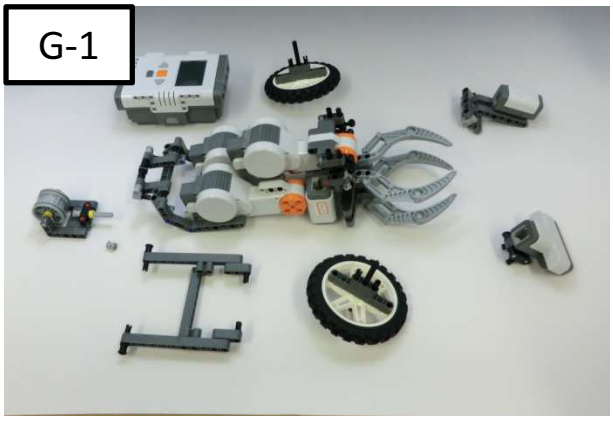
G:全体の組み立て

NXT本体に、充電池もしくは、乾電池を装着する。

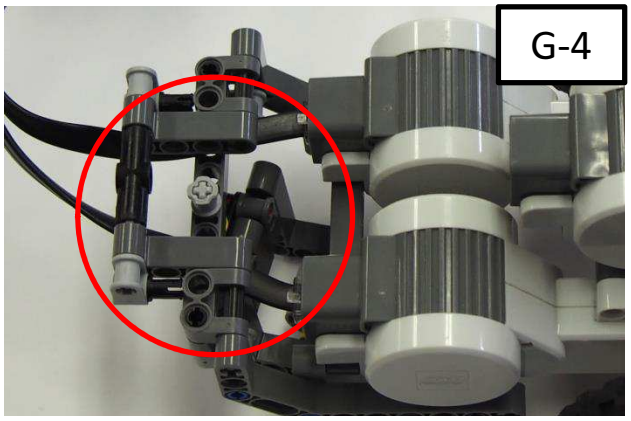


G:全体の組み立て

G-1

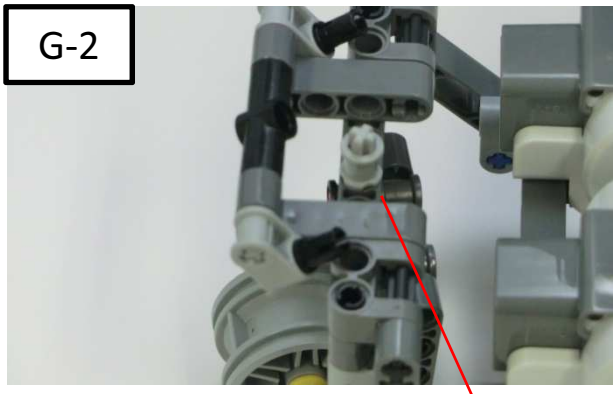


G-4



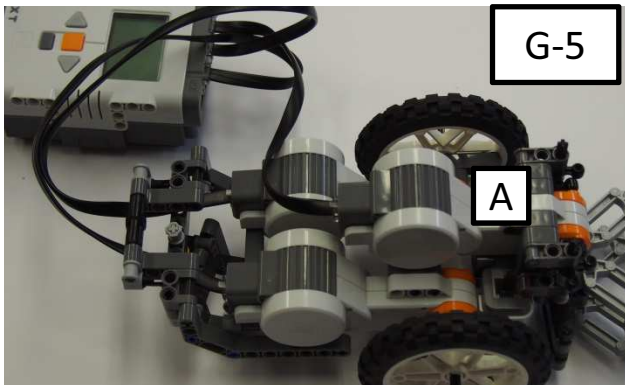
このとき、丸内の透間にケーブルを通す。【難しい】

G-2



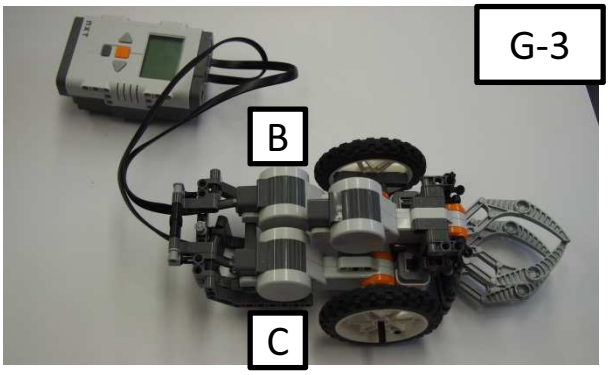
後輪の取付け

G-5



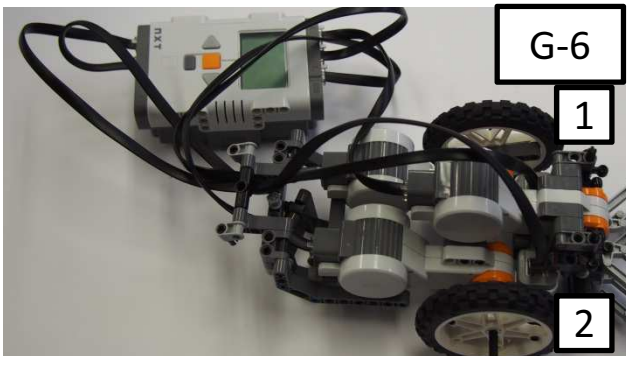
NXT本体Aポートに「A」モータ取付ける

G-3



NXT本体Bポートに「B」モータ取付け、Cポートに「C」モータを取り付ける。

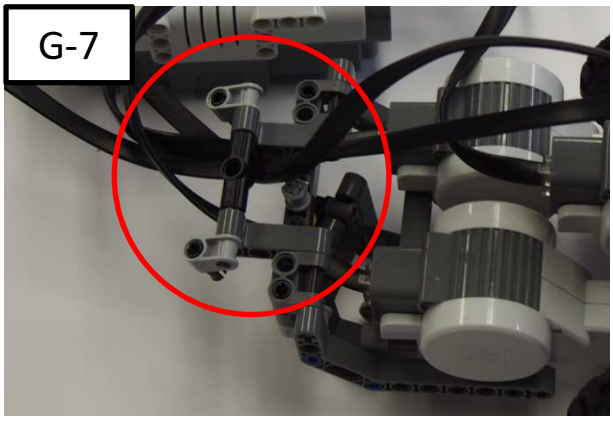
G-6



NXT本体「１」ポート「２」ポートに光センサをそれぞれ取付ける。

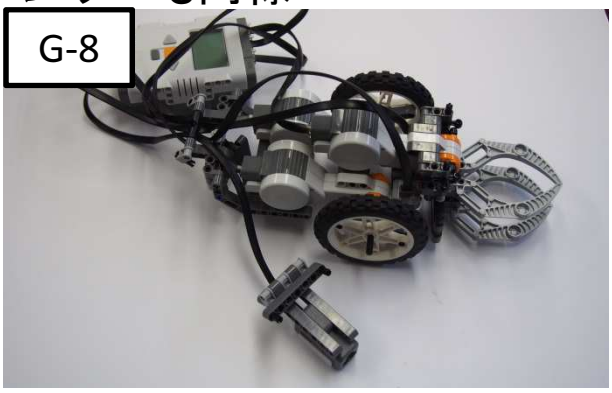
G:全体の組み立て

G-7



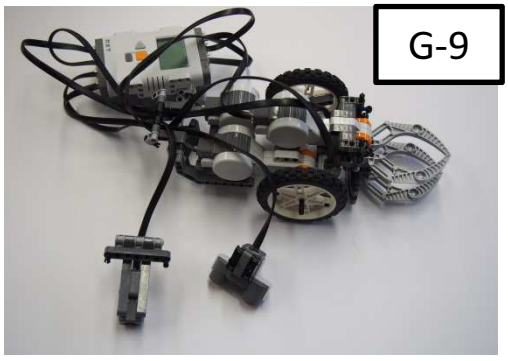
このとき、丸内の透間にケーブルを通す。以下すべてのセンサーも同様

G-8



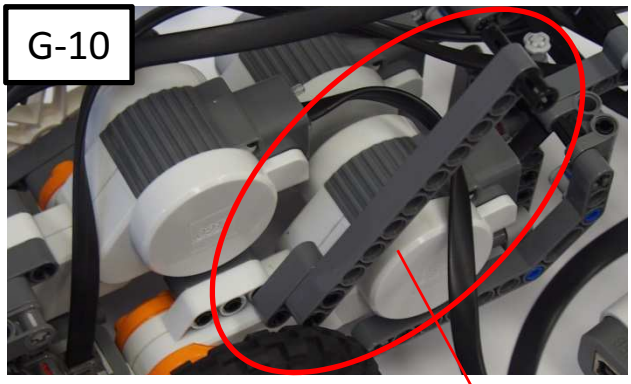
NXT本体「３」ポートにカラーセンサを取付ける。

G-9



NXT本体「４」ポートに超音波センサを取付ける。

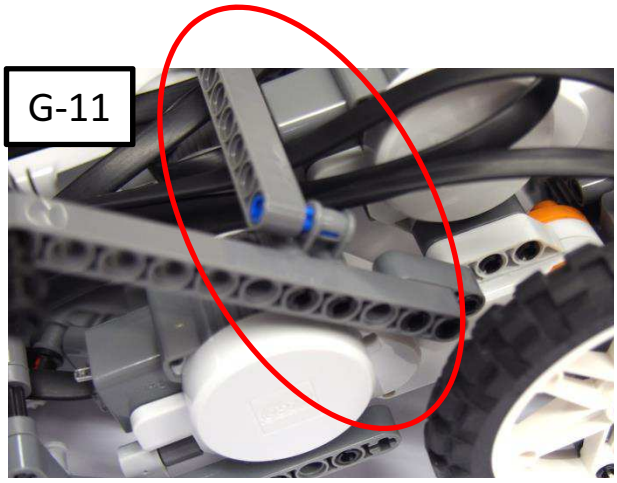
G-10



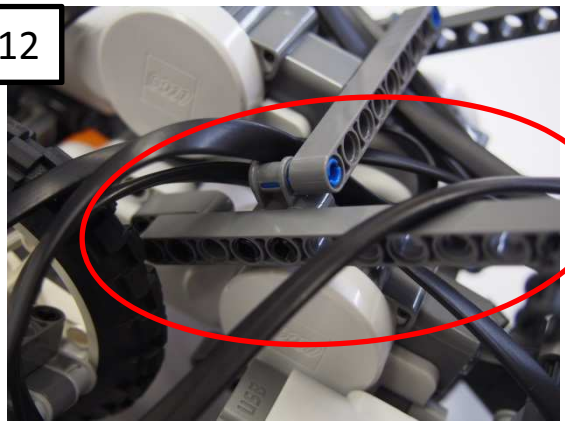
ブリッジの取付け

C-5

G-11

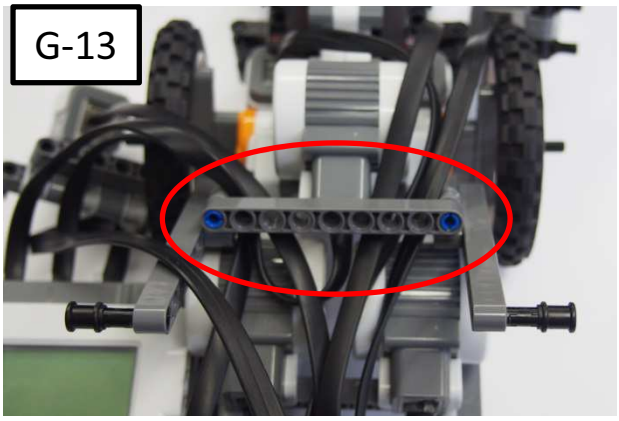


G-12



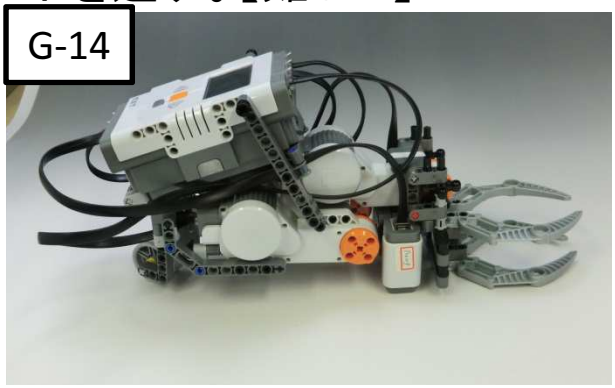
G:全体の組み立て

G-13



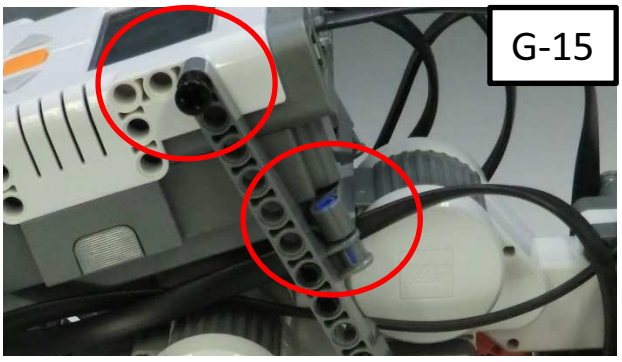
このとき、各センサ・各モータのケーブルは丸内のバーの下を通す。【難しい】

G-14



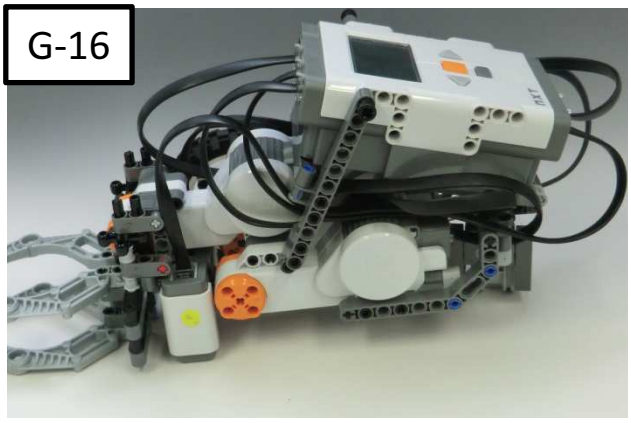
NXT本体の取付け

G-15



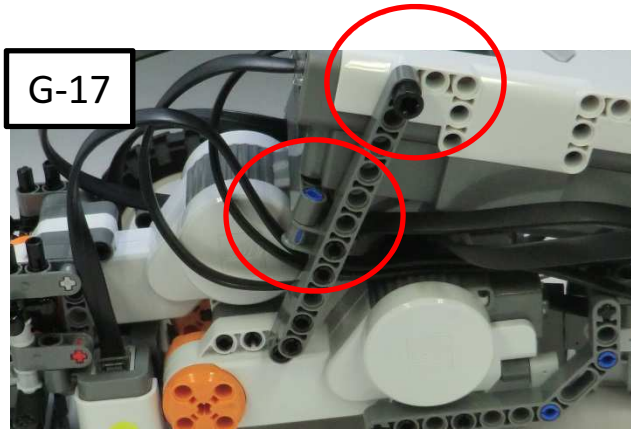
NXT本体の取付けします。【難しい】

G-16

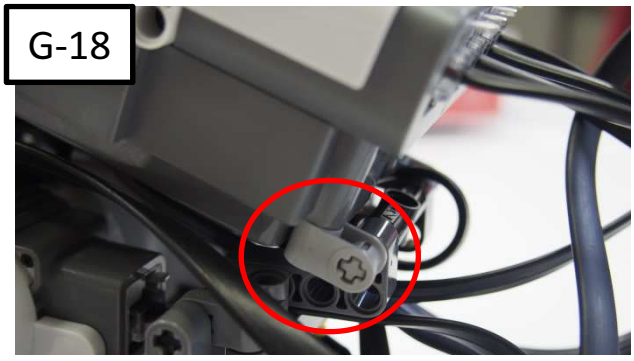


反対側も取付けします。

G-17



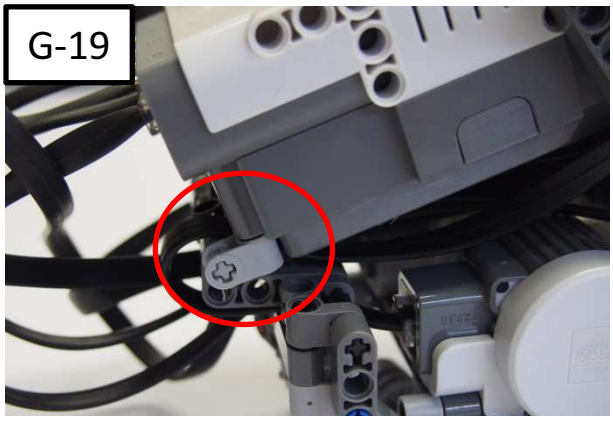
G-18



F:後ろバンパーに取付けします。

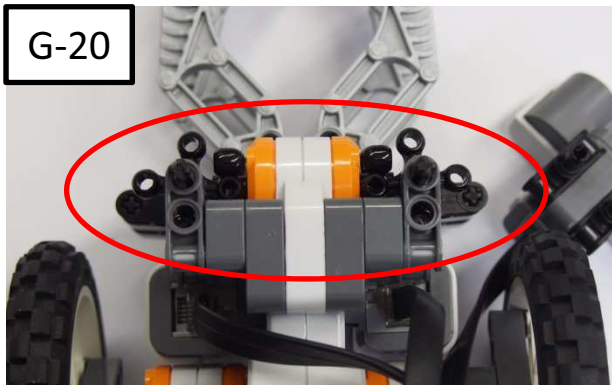
G:全体の組み立て

G-19



反対側も取付けします。

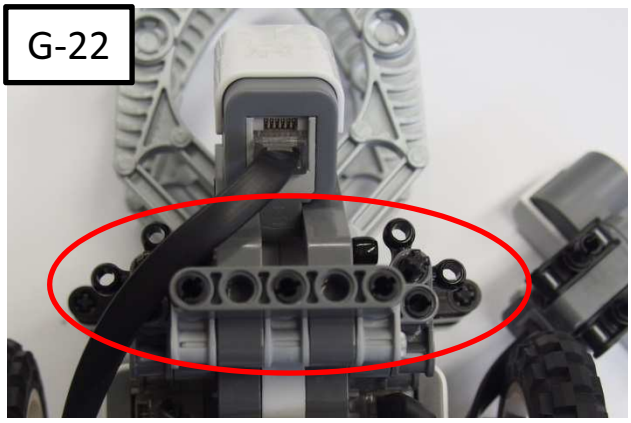
G-20



つめ上部にカラーセンサを取り付けます。

G-21

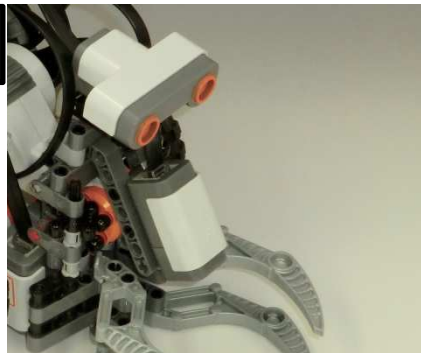
G-22



つめ上部に超音波センサを取り付けます。

G-23

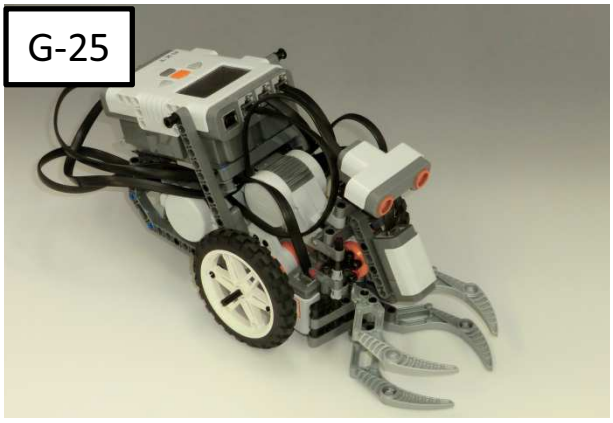
G-24



このように取り付けます。

G:全体の組み立て

G-25



左右に前輪を取り付けます。

G-26

完成