



Coimisiún na Scrúduithe Stáit
State Examinations Commission

JUNIOR CERTIFICATE EXAMINATION, 2018

METALWORK

TECHNIQUES AND DESIGN – PROJECT – ORDINARY LEVEL

300 marks

PROJECT MUST BE COMPLETED BY Friday 13th April, 2018

PLEASE READ CAREFULLY

General Instructions to candidates

The project you make and submit for examination, including the design element, must be **your own individual work**, carried out in the school under the supervision of the teacher.

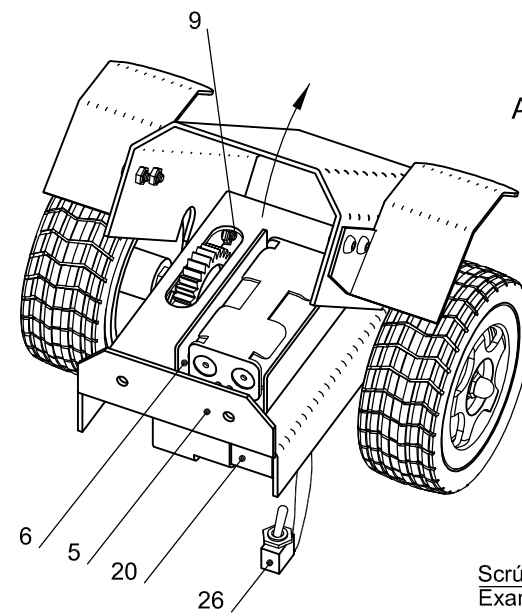
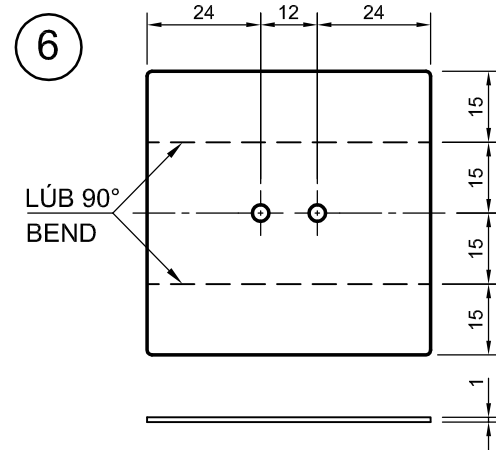
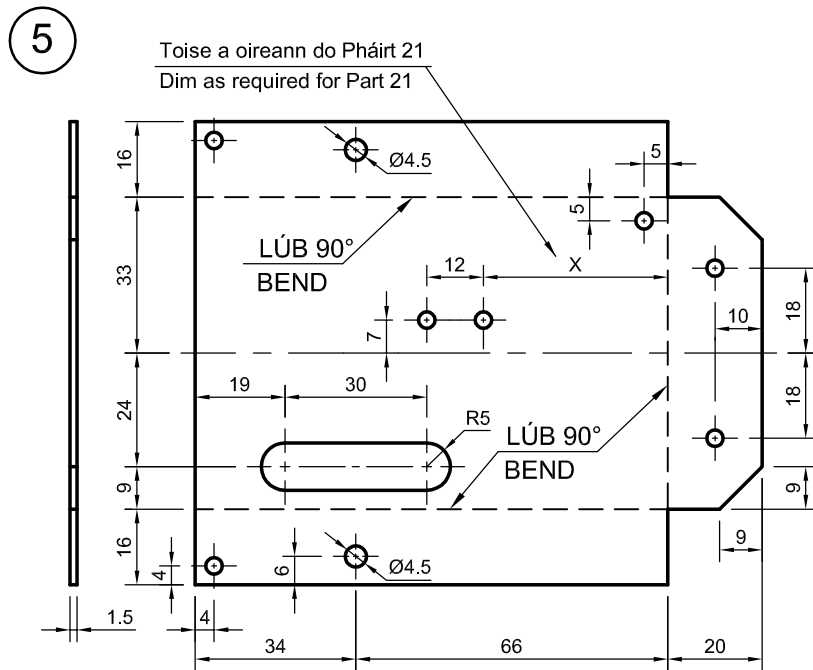
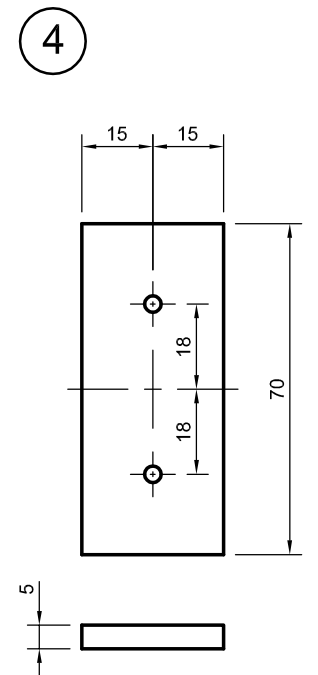
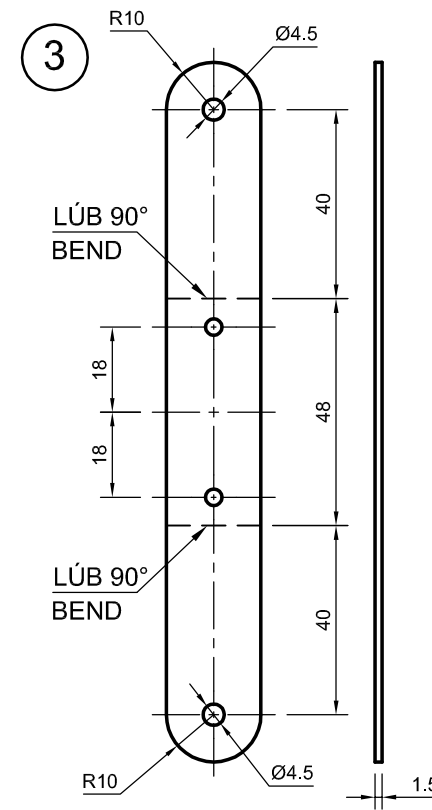
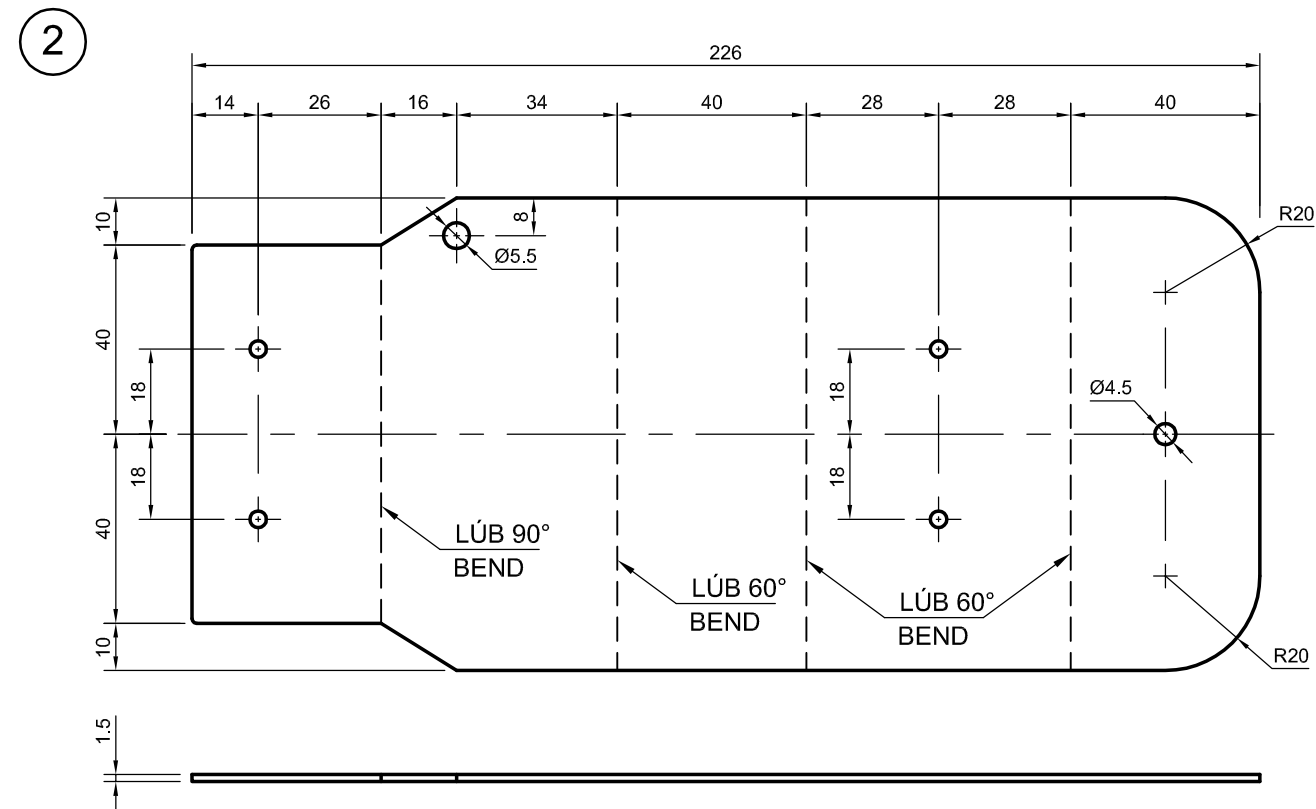
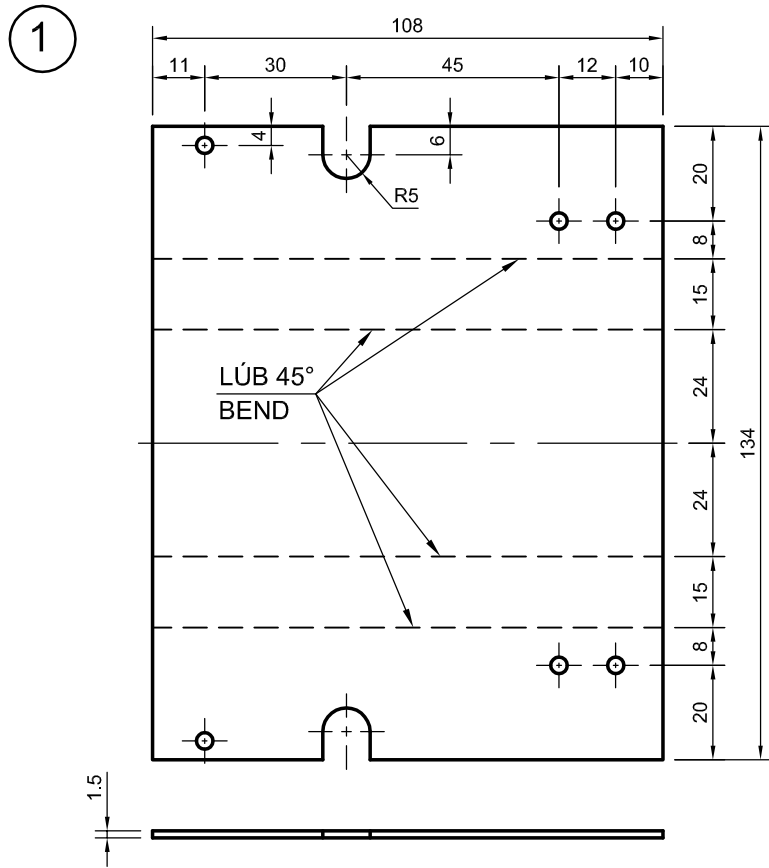
Your own individual work is intended to include the intellectual activity of design along with the practical activities of making the project.

Note: For further information on this project please see the video at the URL shown below.

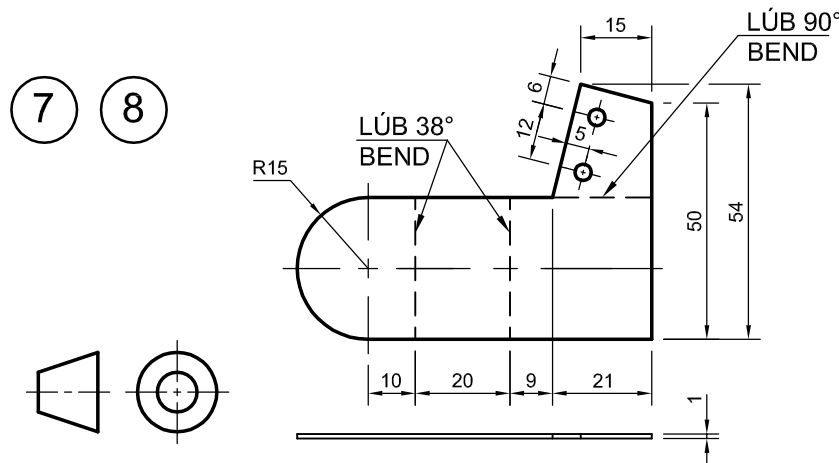
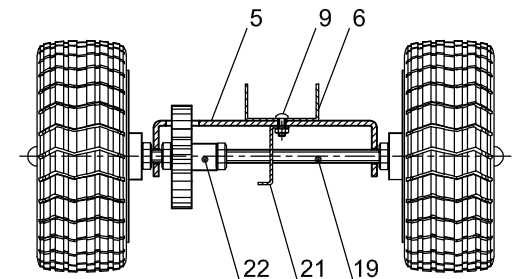
<https://www.examinations.ie/video/index.php/metalwork2018>

Instructions for making the project

1. Details of a **Model Jeep** are shown on the accompanying drawing.
2. Make and assemble the Project using the materials specified in the **Parts List**.
Note: Pop rivets can be used for assembly, if desired.
3. Design, make and attach a **Seat** and a **Front Grill** for the model.
(Note: 20% of the marks will be awarded for this section.)
4. Complete, **test** and **solder** the **Electric Circuit**.
5. Your **Examination Number** must be clearly shown in the position indicated on the drawing.
6. Your completed project, clearly identified with your **Examination Number**, must be available to the visiting examiner **along with the necessary testing equipment**.



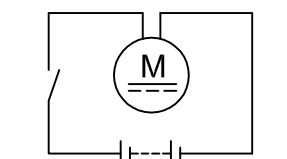
SONRAÍ CÓIMEÁLA
ASSEMBLY DETAILS



Poill gan toisí $\varnothing 3.5$
Undimensioned holes

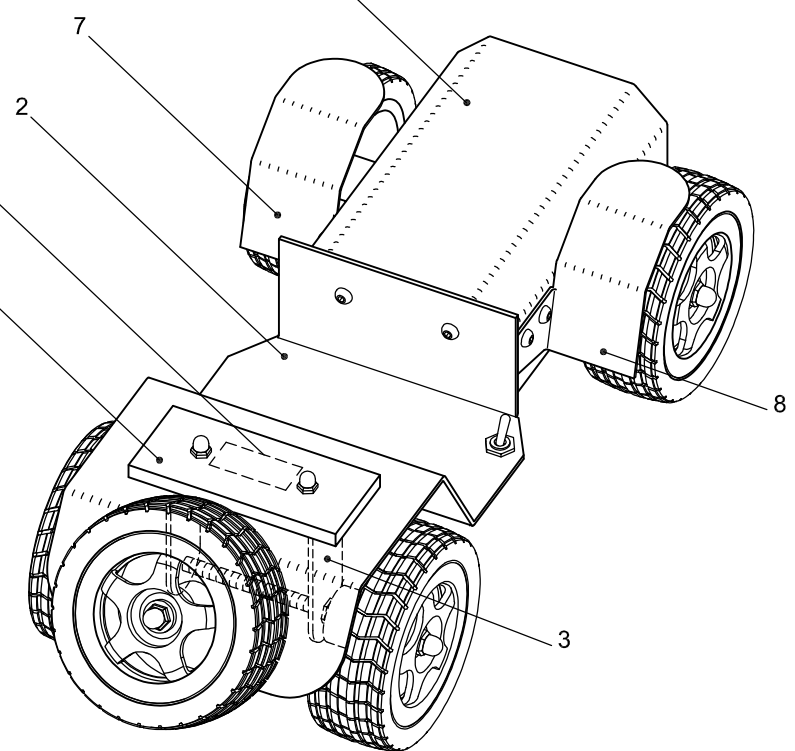
Nóta: Gabhann 20% de na marcanna le Cóimeáil, Bailchríoch agus Feidhmiú.

Note: 20% of the marks will be awarded for Assembly, Finish and Function.



LÉARÁID LEICTREACH
WIRING DIAGRAM

Scrúduitheir
Exam Number



PARTS LIST			
Part No.	Part Name	Req.	Material and Description
1	Bonnet	1	1.5 mm, Aluminium (polished or painted)
2	Rear Chassis	1	1.5 mm, Aluminium (polished or painted)
3	Rear Axle Support	1	1.5 mm, Aluminium (polished or painted)
4	Embellisher	1	5 mm, Coloured Acrylic (polished)
5	Front Chassis	1	1.5 mm, Aluminium (polished or painted)
6	Battery Holder Support	1	1 mm, Aluminium (polished)
7	Left Mudguard	1	1 mm, Brass (polished)
8	Right Mudguard	1	1 mm, Brass (polished)
As Supplied			
9	Screw	10	M3 × 8, Pan Head or Allen Button Head, Steel
10	Screw (Embellisher)	2	M3 × 12, Pan Head or Allen Button Head, Steel
11	Screw (Motor Bracket)	2	M3 × 20, Pan Head or Allen Button Head, Steel
12	Screw (Spare Wheel)	1	M4 × 35, Pan Head or Allen Button Head, Steel
13	Nylock Nut (Bonnet to Chassis)	2	M3, Steel
14	Nut	10	M3, Steel
15	Cap Nut (Embellisher)	2	M3, Steel
16	Nut	7	M4, Steel
17	Cap Nut (Wheels)	5	M4, Steel
18	Rear Axle	1	M4 Threaded Bar (120 mm approximately)
19	Front Axle	1	M4 Threaded Bar (140 mm approximately)
20	3V Motorised Gearbox	1	Perpendicular Motor / Ratio 120:1
21	Motor Bracket	1	As Supplied
22	Front Axle Gear	1	Plastic Gear – 30 Teeth – 4 mm axle hole
23	Motor Gear	1	Plastic Gear – 20 Teeth – to suit gearbox spigot
24	Wheel	5	Ø70 × 27 mm, with 4 mm axle hole
25	Battery Holder + Clip	1	AA × 2
26	Switch	1	Toggle
27	Insulated Wire		As Required

Note: 20% of the marks will be awarded for **Assembly, Finish and Function.**

Note: Pop rivets can be used for assembly, if desired.