



Coimisiún na Scrúduithe Stáit

SCRÚDÚ AN TEASTAIS SHÓISEARAIGH, 2018

MIOTALÓIREACTH

TEICNÍOCHTAÍ AGUS DEARADH – TIONSCADAL – ARDLEIBHÉAL

150 marc

TÁ AN TIONSCADAL LE CRÍOCHNÚ FAOI DÉ hAoine 13 Aibreán, 2018

LÉIGH AN PÁIPÉAR SEO GO CÚRAMACH, LE DO THOIL

Treoracha Ginearálta d'Iarrthóirí

An tionscadal a dhéanann tú agus a chuireann tú ar fáil don scrúdú, páirt an dearaidh san áireamh, **ní mór dó a bheith ina shaothar dílis de do chuid féin** a dhéanann tú sa scoil faoi mhaoirseacht an mhúinteora.

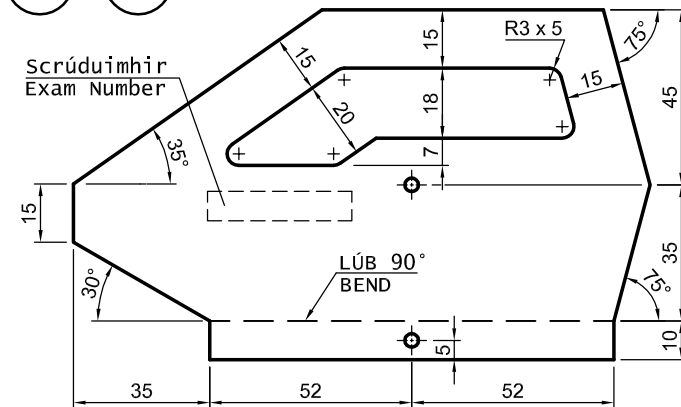
Is é atá i gceist le **saothar dílis de do chuid féin** ná an saothar intleachtach sa dearadh agus an saothar praiticiúil a bhaineann leis an tionscadal a dhéanamh.

Nóta: Féach an físeán ag an URL thíos, le do thoil, le haghaidh tuilleadh eolais faoin tionscadal seo.
<https://www.examinations.ie/video/index.php/metalwork2018>

Treoracha chun an tionscadal a dhéanamh

1. Taispeántar sonraí de **Mhionsamhail de Snowcat** ar an líníocht a ghabhann leis seo.
2. Déan agus cóimeáil an Tionscadal agus úsáid á baint agat as na hábhair atá luaite ar **Liosta na bPáirteanna**. Nótáil: Ní miste an Roth Cúil (**Páirt 31**) a nascadh leis an Leathacastóir Cúil (**Páirt 28**), más gá.
3. (i) Dear agus déan consól rialúcháin don mhionsamhail. Caithfidh na comhbhaill leictreonacha (**Páirt 32 - 35**) a bheith laistigh den chonsól rialúcháin agus caithfear an consól rialúcháin a cheangal den mhionsamhail le cábla ribíneach.
 (ii) Dear agus déan córas inchoigeartaithe teannais le haghaidh gach Crios Boinn, agus nasc leis an mionsamhail iad. Is ceadmhach comhbhaill réamhdhéanta a leasaigh tú a bheith san áireamh i do réiteach dearaidh.
(Nótáil: Tá 20% de na marcanna ag gabháil leis an roinn seo.)
4. Críochnaigh, **tástáil** agus **sádráil** an **Ciorcad Leictreach**.
 Is ceadmhach fáiscíní spáide a úsáid leis an micrealasc, más mian leat,
5. Ní mór do **Scrúduimhir** a bheith le feiceáil go soiléir san áit a léirítear sa líníocht.
6. Ba chóir do thionscadal críochnaithe, agus do **Scrúduimhir** greanta go soiléir air, **chomh maith leis an trealamh tástála riachtanach**, a bheith ar fáil don scrúdaitheoir a thagann ar cuairt.

Scrúduithe
Exam Number



Technical drawing of a mechanical part. The main view shows an L-shaped profile with the following dimensions: vertical leg width 12, vertical leg height 7, horizontal leg height 6, horizontal leg width 16, and a total height of 17. There are two holes in the vertical leg, each with a diameter of 6. The horizontal leg has a thickness of 2. A detail view shows a cross-section of the horizontal leg with a width of 12 and a height of 9. It features two holes, each with a diameter of 6, and a central hole with a diameter of 4, labeled M4. The detail view also shows a thickness of 6 and a total width of 16.

Technical drawing of a mechanical part. The main view shows a cross-section with dimensions: 12, 7, 17, 6, 16, 6, 12, 6, 6, 11, 9, and M4. A section view on the right shows the profile of the part with a dimension of 2.

Technical drawing of a rectangular plate. The top view shows a plate with a total width of 74 and a total height of 12. There are two mounting holes, each with a diameter of M4. The distance from the left edge to the center of the first hole is 5, and the distance from the center of the second hole to the right edge is 5. The distance between the centers of the two holes is 74. The side view shows the plate's thickness, which is 4.

[illegible]

Technical drawing of a mechanical part, showing a top view and a side view.

Top View Dimensions:

- Overall width: 90
- Overall height: 36
- Central hole width: 15
- Central hole height: 21
- Left corner radius: R10
- Right side feature width: 10
- Right side feature height: 36
- Right side fillet: R2
- Bends: LUB 75° BEND, LUB 30° BEND

Side View Dimensions:

- Thickness: 1.5

⑩ 2 De dhíth
OFF

Ø8

8

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

Technical drawing of a rectangular plate. The overall dimensions are 52 (width) and 100 (height). The height is composed of four segments: 10, 26, 26, and 10. There are two circular holes, each with a diameter of 5. The holes are located 10 units from the top and bottom edges and 5 units from the left edge. A dashed centerline is shown horizontally. A side view at the bottom shows a thickness of 3.

Technical drawing of a rectangular plate. The main view shows a rectangle with overall dimensions of 90 (width) and 80 (height, split into two 40 segments). The right side features rounded corners with a radius of R10. A hole with a diameter of $\varnothing 4.5$ is located 20 units from the left edge and 40 units from the bottom edge. A dashed line indicates a bend with a radius of R10 and a bend angle of $\frac{L\ddot{U}B}{BEND} 30^\circ$. A side view at the bottom shows the plate's thickness as 3 units.

SONRAÍ CÓIMEÁLA
ASSEMBLY DETAILS

22

15

20

7

8

5

11

12

14

13

2

9

6

1

3

7

10

Liosta na bPáirteanna			
Uimh.	Páirt	Líon	Ábhar agus Cur Síos
1	Taobhphainéal ar chlé	1	1.5 mm, Alúmanam (snasta nó péinteáilte)
2	Taobhphainéal ar dheis	1	1.5 mm, Alúmanam (snasta nó péinteáilte)
3	Taca don Taobhphainéal	1	Ø8 mm, Alúmanam (snasta)
4	Taca don Mhótar ar dheis	1	30 × 30 × 2 mm, Alúmanam Uilleach (snasta)
5	Taca don Mhótar ar chlé	1	30 × 30 × 2 mm, Alúmanam Uilleach (snasta)
6	Cnó pláta	1	4 mm, Alúmanam (snasta)
7	Fráma	1	1.5 mm, Alúmanam (snasta nó péinteáilte)
8	Taca do Leathacastóir	1	15 × 15 × 15 × 2 mm, U-Alúmanam (snasta)
9	Díon/Painéal Cúil	1	1.5 mm, Alúmanam (snasta nó péinteáilte)
10	Scarthóir don Roth Tosaigh	2	Ø8 mm, Prás (snasta)
11	Taca do Roth Creasa	2	1.5 mm, Alúmanam (snasta nó péinteáilte)
12	Roth Creasa	2	Ø20 mm, Níolón, PVC or Aicéatal (snasta)
13	Painéal Tosaigh	1	1.5 mm, Alúmanam (snasta nó péinteáilte)
14	Gaothscáth	1	3 mm, Aicrileach Fordhaite (snasta)
15	Clúdach don Tras-seoladh	1	3 mm, Aicrileach Daite (snasta)
Curtha ar fáil			
16	Scriú	12	M3 × 8, Ceann Panna nó Ceann Cnaipe Allen, Cruach
17	Scriú	4	M3 × 25, Ceann Panna nó Ceann Cnaipe Allen, Cruach
18	Scriú (Roth Creasa)	2	M3 × 30, Ceann Panna nó Ceann Cnaipe Allen, Cruach
19	Scriú	6	M4 × 6, Ceann Panna nó Ceann Cnaipe Allen, Cruach
20	Scriú	1	M4 × 40, Ceann Panna nó Ceann Cnaipe Allen, Cruach
21	Cnó	18	M3, Cruach
22	Cnó Nylock	2	M3, Cruach
23	Cnó (Páirt 20)	2	M4, Cruach
24	Caidhpchnó	1	M4, Cruach
25	Giarbhosca Mótair 3V	2	Mótar Inlíne / Cóimheas 120:1
26	Giar an Mhótair	2	Giar Plaisteach – 30 Fiacail – oiriúnach do spiogóid an ghiarbhosca
27	Giar an Acastóra	2	Giar Plaisteach – 20 Fiacail – poll acastóra 3 mm
28	Leathacastóir Cúil	2	Slat chruach Ø3 (timpeall 76 mm)
29	Acastóir Tosaigh	1	Barra Snáithithe M3 (timpeall 162 mm)
30	Chrois Boinn	2	Tuairim is 30 mm × 180 mm
31	Roth	4	Ø38 mm; poll acastóra 3 mm (oiriúnach don Chrios Boinn)
32	Gabhdán an Bhataire	1	AA × 3
33	Poitéinsiméadar + Cnaipe	1	5 Vata, 50 Ω, Sreangthochraiste
34	Lasc	1	DPDT
35	Lasc	2	Sá chun Gearrtha

Nóta: Tá 20% de na marcanna ag gabháil le **Cóimeáil, Bailchríoch** agus **Feidhmiú**.