

Essential Skills Wales

Essential Application of Number Skills (EAoNS)

Level 1 Controlled Task

Assessor Pack

Solar Panel Systems

Version 2.3

Sample (Set B)

Produced jointly by the four Essential Skills awarding bodies:

Agored Cymru
City & Guilds
Pearson
WJEC



Assessment requirements

The following is a summary of the Essential Skills Wales (ESW) Controlled Task Conditions. These requirements should be read in conjunction with the relevant **Controlled Task Candidate Pack**. General assessment guidelines applicable to all ESW assessments can be found in the **Essential Skills Wales Suite *Qualification Handbook***.

Controlled task assessment

Controlled tasks are **summative assessments** measuring subject-specific skills. Candidates will need to show they can utilise these skills in a holistic manner, relevant to real-life circumstances. The assessment outcome is **pass/fail**.

Controlled tasks must be:

- internally assessed, by appropriately qualified staff, using the Marking Schemes provided. Please see 2.2 of the ***Qualification Handbook*** for details of staff qualification
- internally quality assured, by appropriately qualified staff
- externally quality assured/moderated by City & Guilds
- compliant with **Controlled task conditions**.

Controlled task conditions

This controlled task must be completed under the conditions set out below. 'Controlled' relates to all aspects of how the task is administered and assessed.

Candidates should only attempt this controlled task when they have been registered for this qualification and have developed the necessary skills at the required level. Learning development input should be completed before the candidate attempts this controlled task. This controlled task must normally be completed before the confirmatory test is attempted.

Working period

The candidate must complete this controlled task within an 8 week 'working period'. The working period commences on the date the candidate starts working on the task. The working period may be extended only in specific extenuating circumstances or if the academic term does not extend to 8 weeks. Please see 4.6 of the ***Qualification Handbook*** for further information.

Working time

The candidate has up to **4 hours in total** to complete this controlled task. This task 'working time' allowance will formally start at the point when a task is first provided to the candidate. The task working time may be extended only in specific extenuating circumstances. Please see 4.6 of the ***Qualification Handbook*** for further information.

Supervised conditions

This controlled task must be completed under the following supervised conditions:

- This task is an 'open book' assessment. Candidates may have access to routine resources that might be available in a 'real life' situation, for example: PCs/laptops, tablets, dictionaries, calculators, reference books, relevant class notes and source material approved by their tutor/assessor so long as they are not designed *specifically* to assist with this assessment and do not compromise independent achievement of the standard. Mobile phones or other transmitting/receiving devices are not permitted. The candidate can access the Internet using supervised facilities.
- The environment within which tasks are completed must be supervised. This supervision must be **continuous** and ensure no interruption and/or undue influence is possible whilst candidates are working on the task. Suitable locations might include a classroom, a library or a workplace as long as an appropriate environment and supervision is maintained. For the avoidance of doubt, this environment does not require formal 'examination' conditions.
- The supervisor must be a reliable, responsible person who is accountable for ensuring adequate supervision and control of the environment is maintained. The supervisor must be present throughout the working time and be able to confirm that each candidate produced all work independently. The supervisor can be the candidate's tutor and/or assessor or another suitable person.
- This controlled task may be completed in one session or split over several sessions, as long as no learning or preparation is provided in between. If not completed in one sitting, the candidate's papers and all materials produced by the candidate must be collected in and stored securely until the next working time session begins. On no account may candidates take any of their work away with them between sessions, for example to work on a task at home.
- The working period and working time taken to complete this controlled task must be monitored and recorded as indicated on the front page of the **Candidate Pack**. The candidate, supervisor, assessor and centre details must be completed and the declarations must be signed and dated before completed tasks are submitted for assessment.

Assistance and access arrangements

Assessors may provide candidates with the opportunity to clarify task requirements during the working period; however this must not extend to any form of formative feedback. For example, recommending that a candidate should review their calculations would be inappropriate, whereas recommending the candidate re-read a particular section of the task requirements would be acceptable. Please see 4.6 of the **Qualification Handbook** for further information on access arrangements.

Second and subsequent attempts

A specific controlled task can be attempted only once. However, a candidate may undertake a different controlled task, (either another title from the City & Guilds pre-approved bank or a centre devised assessment that has been approved by City & Guilds) at another time if they do not pass. Wherever the candidate is unsuccessful, they **must** undergo further development in the relevant skill(s) before re-attempting at a later date.

Collaboration

This controlled task requires the candidate to work individually.

Mark Scheme

Essential Application of Number Skills at Level 1

Task title: Solar Panel Systems

Part 1 (maximum 2 marks)	At least 1 mark for row A required to pass	
The candidate has shown evidence of:	Mark scheme	Row
<p>planning and describing how to tackle the task (N1.1.1a)</p>	<p>2 marks: candidate produces a complete plan</p> <p>The plan must include: the information needed from the source materials AND the calculations to be done AND how results for Part 2 and Part 3 will be presented</p> <p>The structure must be in the form of: e.g. a list, table or flow chart e.g. a spider diagram with arrows or numbers to show a logical sequence Accept a narrative plan with a clear structure to show a logical sequence.</p> <p>OR</p> <p>1 mark: candidate shows clear evidence of planning but with up to two errors or omissions e.g. a flow chart with one or two action points missing e.g. a complete spider diagram with no indication of the order in which action points are to be carried out e.g. a list of action points in order, with no indication of a specific method of presentation for one or both parts of the task Accept a complete narrative plan with limited structure or a well-structured plan with up to two errors or omissions.</p> <p>See an example of a suitable plan at the end of the mark scheme.</p> <p>Award 0 marks for a plan that is substantially copied from the Candidate Pack.</p>	<p>A</p>

Part 2 (maximum 9 marks)		
The candidate has shown evidence of:	Mark scheme	Row
working out perimeters, areas and volumes (area of a rectangle) (N1.2h)	<p>1 mark: candidate shows a correct process to find the area of the space for solar panels e.g. $5 \times 4.3 (= 21.5 \text{ m}^2)$</p> <p>1 mark: correct answer i.e. $21.5 \text{ (m}^2)$</p>	B
reading, understanding and extracting information from tables, charts, simple graphs and diagrams (N1.1.2a)	<p>1 mark: candidate shows the power rating of a suitable solar panel system (Source 2) e.g. 2.4 (kW)</p> <p>May be seen in working or indicated on the table in Source 2.</p> <p>Accept correct use of their answer from row B.</p>	C
reading, understanding and extracting information from tables, charts, simple graphs and diagrams (N1.1.2a)	<p>1 mark: candidate indicates the number of units of electricity the system can generate each year (Source 3) e.g. 2160 (units for a 2.4 kW system) Accept a correct value based on their chosen power rating ± 30 (units)</p> <p>May be seen in working or indicated on the graph in Source 3.</p> <p>Accept correct use of their answer from row C.</p>	D
<p>reading and understanding numbers presented in different ways including ... decimals (N1.1.2b)</p> <p>adding, subtracting, multiplying, dividing and recording sums of money (N1.2f)</p>	<p>1 mark: candidate shows a correct process to find the amount of money the friends can make each year e.g. $2160 \times 0.056 (= \text{£}120.96)$</p> <p>1 mark: correct answer e.g. $\text{£}120.96$</p> <p>Correct units required.</p> <p>Accept correct use of their answer from row D.</p>	E

identifying more than one appropriate way to present findings to a given audience including using tables, charts, graphs or diagrams (N1.3.1a)	1 mark: candidate uses an appropriate method of presentation for their results e.g. table, bar chart, pie chart or diagram	F
using appropriate ways to present findings including a table, chart, graph or diagram using the correct units (N1.3.1b)	1 mark: candidate uses suitable title AND labels AND units	
labelling work correctly (N1.3.1c)	1 mark: candidate populates table, chart or diagram with correct data (± 2 mm tolerance for plots on a hand drawn chart)	

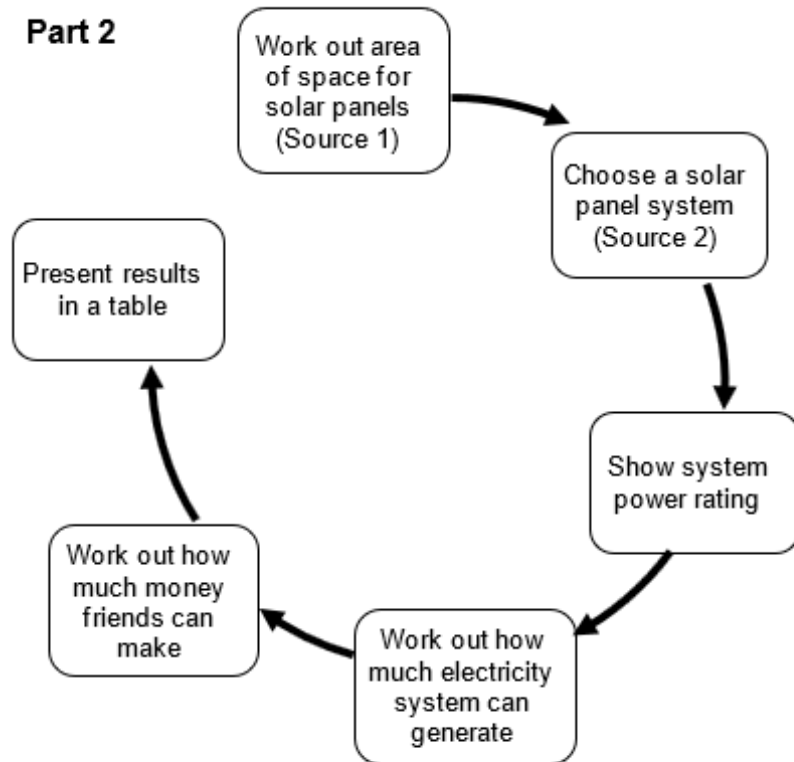
Part 3 (maximum 12 marks)		
The candidate has shown evidence of:	Mark scheme	Row
reading and understanding numbers presented in different ways including ... percentages (N1.1.2b)	1 mark: candidate shows a correct process to find a percentage discount e.g. $4399 \times 15 \div 100 (= £659.85)$ e.g. $1 - 0.15 (= 0.85)$	G
using simple fractions and percentages (N1.2d)	1 mark: candidate shows a complete correct process to find the total cost from Pete's Panels after discount e.g. $4399 \times 15 \div 100 (= £659.85)$ AND $4399 - 659.85 (= £3739.15)$ e.g. $4399 \times 0.85 (= £3739.15)$ 1 mark: correct answer i.e. (£)3739.15	

<p>using ratios and proportions (N1.2i)</p>	<p>1 mark: candidate shows a correct process to find the discount for GW Systems e.g. $4000 \div 1000 \times 89 (= \text{£}356)$ e.g. $4000 \div 1000 (= 4)$ AND $(4 \times 89) (= \text{£}356)$</p> <p>1 mark: candidate shows a correct process to find the discounted cost for GW Systems e.g. $4000 - (4000 \div 1000 \times 89) (= \text{£}3644)$ e.g. $4000 - 356 (= \text{£}3644)$</p> <p>1 mark: correct answer i.e. (£) 3644</p>	H
<p>working to given levels of accuracy (N1.2a)</p>	<p>1 mark: candidate shows correct rounding of costs from both companies e.g. (£)3740 (for Pete’s Panels) AND (£)3640 (for GW Systems)</p> <p>Accept correct use of their answers from row G and row H.</p>	J
<p>identifying more than one appropriate way to present findings to a given audience including using tables, charts, graphs or diagrams (N1.3.1a)</p> <p>using appropriate ways to present findings including a table, chart, graph or diagram using the correct units (N1.3.1b)</p> <p>labelling work correctly (N1.3.1c)</p>	<p>1 mark: candidate uses an appropriate method of presentation for their results, different to the one used in Part 2 e.g. table, bar chart, pie chart or diagram.</p> <p>1 mark: candidate uses suitable title AND labels AND units</p> <p>1 mark: candidate populates table/chart/graph or diagram with correct data ($\pm 2\text{mm}$ tolerance for plots on a hand drawn chart or graph)</p>	K
<p>describing the meaning of results and explaining how they meet the purpose of the task (N1.3.2c)</p> <p>interpreting results of calculations (N1.3.2a)</p>	<p>1 mark: candidate chooses one company and gives at least one valid reason e.g. I suggest buying the solar panel system from GW Systems because it is cheaper than the other companies.</p> <p>1 mark: candidate makes at least one valid comment to compare their answers for the cost and earnings from a solar panel system e.g. The solar panel system will cost $\text{£}3640$ which is (over 30 times) more than the amount my friends will make each year from selling electricity.</p>	L

Example of a plan for row A

Solar Panel Systems Task Plan

Part 2



Part 3

