

# **Pearson Edexcel Level 2 Certificate in Essential Skills – Application of Number (Northern Ireland)**

## **Sample Assessment Material – Mark Scheme**

September 2016

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

**Edexcel, BTEC and LCCI qualifications**

Edexcel, BTEC and LCCI qualifications are awarded by Pearson, the UK's largest awarding body offering academic and vocational qualifications that are globally recognised and benchmarked. For further information, please visit our qualification websites at [www.edexcel.com](http://www.edexcel.com), [www.btec.co.uk](http://www.btec.co.uk) or [www.lcci.org.uk](http://www.lcci.org.uk). Alternatively, you can get in touch with us using the details on our contact us page at [qualifications.pearson.com/contactus](http://qualifications.pearson.com/contactus)

**About Pearson**

Pearson is the world's leading learning company, with 40,000 employees in more than 70 countries working to help people of all ages to make measurable progress in their lives through learning. We put the learner at the centre of everything we do, because wherever learning flourishes, so do people. Find out more about how we can help you and your learners at [qualifications.pearson.com](http://qualifications.pearson.com)

*References to third party material made in this specification are made in good faith. Pearson does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)*

*All information in this specification is correct at time of publication.*

ISBN 978 1 446 93328 2

All the material in this publication is copyright  
© Pearson Education Limited 2016

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

**Guidance for Marking Essential Skills Application of Number Papers**

**General**

- All candidates must receive the same treatment. You must mark the first candidate in exactly the same way as you mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- All the marks on the mark scheme are designed to be awarded. You should always award full marks if deserved, i.e. if the answer matches the mark scheme. You should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

**Applying the Mark Scheme**

- The mark scheme has a column for **Process** and a column for **Evidence**. In most questions the majority of marks are awarded for the process the candidate uses to reach an answer. The evidence column shows the most likely examples you will see if the candidate gives different evidence for the process, you should award the mark(s).
- **Finding 'the answer'**: in written papers, the demand (question) box should always be checked as candidates often write their 'final' answer or decision there. Some questions require the candidate to give a clear statement of the answer or make a decision, in addition to working. These are always clear in the mark scheme.
- If working is **crossed out and still legible**, then it should be marked, as long as it has not been replaced by alternative work.
- If there is a **choice of methods** shown, then mark the working leading to the answer given in the answer box or working box. If there is no definitive answer then marks should be awarded for the 'lowest' scoring method shown.
- A suspected **misread** may still gain process marks.
- It may be appropriate to **ignore subsequent work (isw)** when the candidate's additional work does not change the meaning of their answer.
- You will often see correct working followed by an incorrect decision, showing that the candidate can calculate but does not understand the functional demand of the question. The mark scheme will make clear how to mark these questions.
- **Transcription** errors occur when the candidate presents a correct answer in working, and writes it incorrectly (on the answer line in a written paper); mark the better answer.
- **Follow through marks (ft)** must only be awarded when explicitly allowed in the mark scheme. Where the process uses the candidate's answer from a previous step, this is clearly shown. Speech marks are used to show that previously incorrect numerical work is being followed through, for example '**240**' means **their** 240.
- Marks can usually be awarded where **units** are not shown. Where units, including money, are required this will be stated explicitly. For example, 5(m) or (£)256.4 indicates that the units do not have to be stated for the mark to be awarded.
- **Correct money notation** indicates that the answer, in money, must have correct notation to gain the mark. This means that money should be shown as £ or p, with the decimal point correct and 2 decimal places if appropriate. e.g. if the question working led to  $£12 \div 5$ ,  
Mark as correct: £2.40 240p £2.40p 2.40£ Mark as incorrect: £2.4 2.40p £240p 2.4 2.40 240
  - Candidates may present their answers or working in many **equivalent** ways. This is denoted **oe** in the mark scheme. Repeated addition for multiplication and

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

repeated subtraction for division are common alternative approaches. The mark scheme will specify the minimum required to award these marks.

- A **range** of answers is often allowed :
  - [12.5, 105] is the inclusive closed interval
  - (12.5, 105) is the exclusive open interval
- **Parts of questions:** because most FS questions are unstructured and open, you should be prepared to award marks for answers seen in later parts of a question, even if not explicit in the expected part.
- Discuss any queries with your Team Leader.
- **Graphs**  
The mark schemes for most graph questions have this structure:

Process		Evidence
Appropriate graph or chart – (e.g. bar, stick, line graph)	1 or	1 of: linear scale(s), labels, plotting (2 mm paper-based ±1 small square onscreen tolerance)
	2 or	2 of: linear scale(s), labels, plotting (2 mm paper-based ±1 small square onscreen tolerance)
	3	all of: linear scale(s), labels, plotting (2 mm paper-based ±1 small square onscreen tolerance)

The mark scheme will explain what is appropriate for the data being plotted.

A **linear scale** must be linear **in the range where data is plotted**, whether or not it is broken, whether or not 0 is shown, whether or not the scale is shown as broken. Thus a graph that is 'fit for purpose' in that the **data is displayed clearly and values can be read**, will gain credit.

The minimum requirements for **labels** will be given, but you should give credit if a title is given which makes the label obvious.

**Plotting** must be correct for the candidate's scale. Candidate's scale must be in numerical order. Award the mark for plotting if you can read the values clearly, even if the scale itself is not linear.

The mark schemes for **Data Collection Sheets** refer to **input opportunities** and to **efficient input opportunities**. When a candidate gives an input opportunity, it is likely to be an empty cell in a table, it may be an instruction to 'circle your choice', or it may require writing in the data in words. These become efficient, for example, if there is a well-structured 2-way table, or the input is a tick or a tally rather than a written list.

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

**Section A: Business trip**

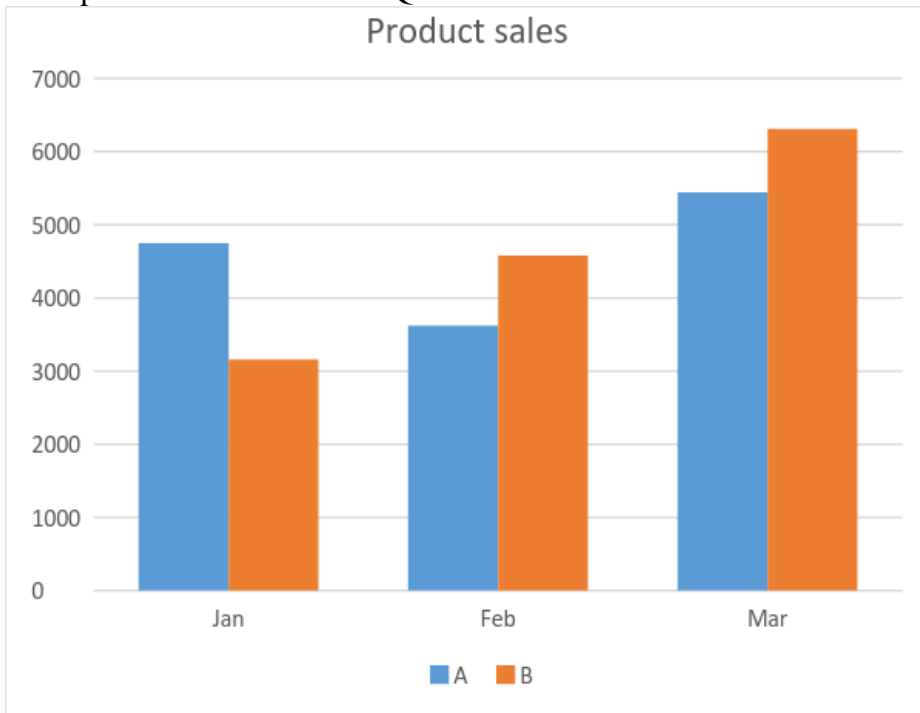
Question	Skills Standard	Process	Mark	Mark Grid	
<b>Q1(a)</b>	C4	Process to find the cost of renting the car for 5 days without points	1	A	$16.53 \times 5 (=82.65)$
	R2	Process to find number of multiples of 500 points OR the value of each loyalty point OR the amount in £ that points should cover	1 or	B	$5847 \div 500 (=11.694)$ <b>OR</b> $2.5 \div 500 (=0.005p)$ <b>OR</b> $'82.65' - 50 (=32.65)$
	R3	Process to find total money off with bundles of 250 points or all points OR number of multiples of 250 loyalty points required	2 or	BC	$'11' \times 2.5 (=27.5)$ <b>OR</b> $'32.65' \div 2.5 (=13.06)$ Allow $'0.005' \times 5847 (=29.23,29)$
	C4	Full process to find figures to compare	3	BCD	$'82.65' - '27.5' (=55.15)$ <b>OR</b> $'14' \times 500 (=7000)$ Allow $'82.65' - '[29.23,29)$
	I7	Correct conclusion with accurate figures	1	E	No <b>AND</b> (£)55.15 <b>OR</b> No <b>AND</b> 7000 (loyalty points) Allow No <b>AND</b> (£) 53.41 (cost)
<b>Q1(b)</b>	R2	Begins to engage with gallons	1 or	F	$240 \div 53.1 (=4.51.. gallons)$ $20 \div 4.546 (=4.39.. gallons)$ $53.1 \div 4.546 (=11.68..miles)$
	C4	Full process to find figures to compare	2 or	FG	$'4.51..' \times 4.546 (=20.54.. litres)$ $'4.93..' \times 53.1(=233.61.. km)$ $240 \div 53.1 (=4.51.. gallons)$ $240 \div '11.68..' (=20.54..litres)$
	I7	Correct conclusion with accurate figures	3	FGH	No <b>AND</b> 20(.54.. litres) <b>OR</b> No <b>AND</b> 256(.97.. miles) <b>OR</b> No <b>AND</b> 4.5(1.. ) and 4.3(0..)
<b>Q1(c)</b>	C5	Valid check	1	I	Valid check e.g. reverse calculation (figures) or alternative method
<b>Total marks for question</b>			<b>9</b>		

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

Question	Skills Standard	Process	Mark	Mark Grid	
Q2(a)	R1	Begins to draw suitable graph or chart	1 or	J	<b>One</b> of: linear scale, correct
	C4	Improves graph	2 or	JK	<b>Two</b> of: linear scale, correct
	I6	Fully correct comparison graph or chart	3	JKL	<b>All</b> of: linear scale, correct  (tolerance on plotting of $\pm$ square for onscreen) Minimum acceptable label (accept similar) Comparison bar chart <b>or</b> c
Q2(b)	R3	Begins to work with fraction	1 or	M	$(2.03 + 1.49) \div 5.1 (=0.690)$ $5.1 \times 2 \div 3 (=3.4)$ <b>OR</b> $2.03 + 1.49 (=3.52)$ <b>and</b> 0.
	C4	Full process to find figures to compare	2 or	MN	$(2.03 + 1.49) \div 5.1 (=0.690)$ $2.03+1.49 (=3.52)$ <b>and</b> 5.1 $2.03 + 1.49 (=3.52)$ <b>and</b> '1
	I7	Valid conclusion with accurate figures	3	MNP	Yes <b>AND</b> 0.69(01..) <b>and</b> 0 Yes <b>AND</b> (£) 3.4 <b>and</b> (£) 3 Yes <b>AND</b> (£) 3.16 <b>and</b> (£) Comparable figures must be percentage.
<b>Total marks for question</b>			<b>6</b>		

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

Example of correct answer to Q2a



**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

Question	Skills Standard	Process	Mark	Mark Grid																
<b>Q3(a)</b>	R2	Begins to design summary table	1 or	Q	Input opportunities <b>AND</b> h Rating Length of employment Gender (accept headings that have be efficient - could be a qu															
	I6	Completes summary table	2	QR	Efficient summary table w opportunities.															
	C4	Begins populating their table with totals	1 or	S	Completes their table with year NB award only if mark Q a															
	I6	Efficient table with correct figures	2	ST	Fully correct answer, e.g.															
					<table border="1"> <thead> <tr> <th></th> <th colspan="2">Male</th> </tr> <tr> <th></th> <th>&lt; 1 year</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>excellent</td> <td>1</td> <td>2</td> </tr> <tr> <td>good</td> <td>2</td> <td>0</td> </tr> <tr> <td>poor</td> <td>1</td> <td>0</td> </tr> </tbody> </table>		Male			< 1 year	1	excellent	1	2	good	2	0	poor	1	0
	Male																			
	< 1 year	1																		
excellent	1	2																		
good	2	0																		
poor	1	0																		
<b>Q3(b)</b>	C4	Full process to find mean or median	1 or	V	(127500 + 114900 + 123400) ÷ 3 (127500 + 123400) ÷ 2(=1															
	I7	Correct decision with accurate figures	2	VW	Yes <b>AND</b> (£)127550 (mean) No <b>AND</b> (£)125450 (medi															
<b>Total marks for question</b>			<b>6</b>																	

Question	Skills Standard	Process	Mark	Mark Grid	
<b>Q4(a)</b>	R2	Process to find the capacity	1 or	X	$7.5 \times 7.5 \times 16 (=900)$
	C4	Full process to find capacity in litres	2 or	XY	'900' ÷ 1000 (=0.9)
	I6	Correct answer	3	XYZ	0.9 (litres)
<b>Q4(b)</b>	C5	Valid check	1	I	Valid check e.g. reverse ca figures) or alternative meth
<b>Total marks for question</b>			<b>4</b>		



**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

**Section B: Home improvements**

Question	Skills Standard	Process	Mark	Mark Grid	
<b>Q5</b>	R3	Begins to work with formula or works out amount available for the total repayment	1 or	A	$(1.035) \times (1.035) \times (1.035) \times 310 \times (3 \times 12)$ (=11160)
	C4	Substitutes in the formula or full process to find figures to compare	2 or	AB	$10000 \times '1.108..'$ (=11087.17) $(1.035) \times (1.035) \times (1.035) \times 10000$ (=1.116)
	I6	Accurate total amount to repay or figures to compare	3	ABC	(£)[11087.17,11087.18] <b>OR</b> 1.108.. <b>and</b> 1.116
	C4	Process to find the amount of monthly repayment <b>OR</b> the total amount of the loan they can afford	1 or	D	'[11087,11087.2]' $\div (3 \times 12)$
	I7	Correct conclusion with accurate figures	2	DE	Yes <b>AND</b> (£)[307.9(0),308.0] Yes <b>AND</b> (£)[11087.17,11087.18] Yes <b>AND</b> 1.108 <b>and</b> 1.116
<b>Total marks for question</b>			<b>5</b>		

Question	Skills Standard	Process	Mark	Mark Grid	
<b>Q6(a)</b>	R1	Begins to consider the scale and shape	1 or	F	Rectangle 7 sq lengths by 3 lengths Shape with at least 5 sides 4 correct sides of: 3.5, 7, 3, 3.5 (clockwise or anti-clockwise)
	R2	Improves their solution	2 or	FG	Shape with 6 sides and 5 in lengths 5 correct sides of: 3.5, 7, 3, 3.5, 7 angle and at least 4 correct sides order, clockwise or anti-clockwise
	I6	Fully correct L shape	3	FGH	Correct L shape NB allow reflected shape

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

	C4	Considers position constraints	1	I	Their shape placed at least lengths from the door and NB award only if F mark a
<b>Q6(b)</b>	I6	Selects correct fan	1	J	Selects B
<b>Q6(c)</b>	R2	Works with discount	1 or	K	$0.15 \times '89.59'$ (=13.43..) o
	C4	Full process to find the price	2 or	KL	$0.85 \times '89.59'$ (=76.1515)
	I6	Correct answer in correct money notation	3	KLM	£76.15 <b>or</b> £76.16 in correc
<b>Total marks for question</b>			<b>8</b>		

Example of fully correct answer to Q6a

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

Question	Skills Standard	Process	Mark	Mark Grid	
Q7(a)	C4	Works with probability	1 or	N	$100 - 27(=73)$ oe
	I6	Correct answer	2	NP	73% oe
Q7(b)	R1	Begins to work with time	1 or	Q	$6 \times 12 (=72 \text{ min})$ oe <b>OR</b> Adds two correct times to Subtracts two correct times Adds two times, e.g. $25 +$
	R3	Develops work	2 or	QR	Adds three correct times to <b>Subtracts three cor</b> <b>2 - '150' - 25 - '45' O</b> Adds three times, e.g. $25 +$
	C4	Full process to find figures to compare	3 or	QRS	e.g. $'72' + 25 + '45' + '150'$ $(=300)$ oe <b>OR</b> 9, 10.12, 10.37, 11.22, 13.5 14, 11.30, 10.45, 10.20, 9.0
	I7	Correct conclusion with accurate figures	4	QRST	Yes <b>AND</b> 13.52 oe (finish Yes <b>AND</b> 9.08 (start time t Yes <b>AND</b> 292 <b>and</b> 300 (m
<b>Total marks for question</b>			<b>6</b>		

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

<b>Question</b>	<b>Skills Standard</b>	<b>Process</b>	<b>Mark</b>	<b>Mark Grid</b>	
<b>Q8(a)</b>	R1	Process to find the area of the room	1 or	U	$3.75 \times 4.9 (=18.375)$
	C4	Process to find number of packs needed	2	UV	'18.375' $\div$ 2.77 (=6.63..)
	R3	Process to find total cost before discount or total amount affordable with discount	1 or	W	'7' $\times$ 99.72 (=698.04) <b>OR</b> 99.72 $\div$ 4 $\times$ 3 (=74.79) <b>OR</b> 530 $\div$ 3 $\times$ 4 (=706.66..)
	C4	Full process to find figures to compare	2 or	WX	'698.04' $\div$ 4 $\times$ 3 (=523.53) '74.79' $\times$ 7 (=523.53) <b>OR</b> '706.66..' $\div$ '7' (=100.95..)
	I7	Correct conclusion with accurate figures	3	WXY	Yes <b>AND</b> (£)523(.53) <b>OR</b> Yes <b>AND</b> (£)100(.85)
<b>Q8(b)</b>	C5	Valid check	1	Z	Valid check, e.g. reverse c method
<b>Total marks for question</b>			<b>6</b>		

**PEARSON EDEXCEL LEVEL 2 CERTIFICATE IN ESSENTIAL SKILLS -  
APPLICATION OF NUMBER  
MARK SCHEME – SAMPLE ASSESSMENT MATERIAL**

September 2016

For information about Edexcel, BTEC and LCCI qualifications  
visit [qualifications.pearson.com](http://qualifications.pearson.com)

Edexcel is a registered trademark of Pearson Education Limited  
Pearson Education Limited. Registered in England and Wales No. 872828  
Registered Office: 80 Strand, London WC2R 0RL.  
VAT Reg No GB 278 537121