

National Numeracy Tests

REASONING

8ER17

First name _____

Last name _____

School _____

Class _____

Date of birth

Date of test 2 0 1 7

Total score (maximum 20)



Llywodraeth Cymru
Welsh Government

1

	Price list	1 to 9	£2.15 each
		10 to 49	£1.99 each
		50 to 99	£1.70 each
		100 +	£1.39 each



We think we should buy 45 T-shirts.

Show why it would be cheaper to buy 50 T-shirts rather than 45




2m



We think we should buy 60 T-shirts and sell them for £5 each.

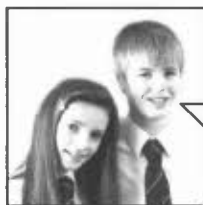
If they buy 60 T-shirts, what is the smallest number of £5 T-shirts they must sell to make a profit?



T-shirts

2m

The group makes a decision.



We will buy 100 T-shirts.

We will sell them at £4.50 each, with 10% off in the first week.

They sell 60 T-shirts with 10% off,
and another 32 T-shirts at the full price of £4.50

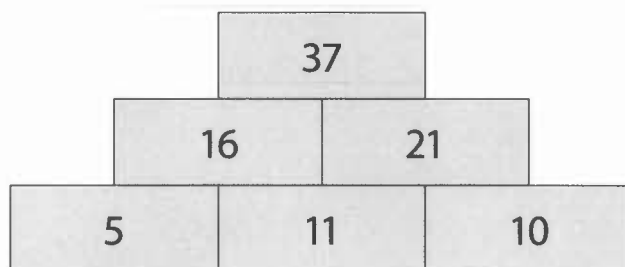
How much profit do they make?



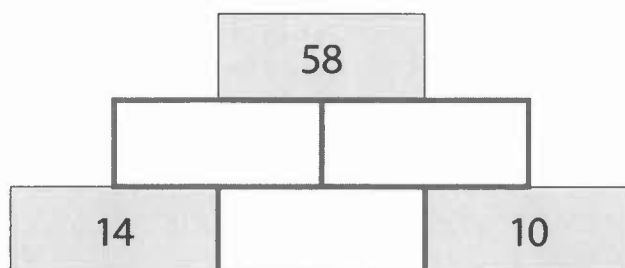
£ profit


- 2 Here is a number wall.

Each number is the sum of the two numbers directly below it.



Work out the missing numbers in the number wall below.





Number walls (if you need them)

- 3 Owen wants to add 2-digit numbers to make a 4-digit number.

What is the smallest amount of 2-digit numbers that he needs?








2m




Total cost


£14.50








Total cost


£35.75

Work out the cost of both items.





£



£

3m

TOTAL

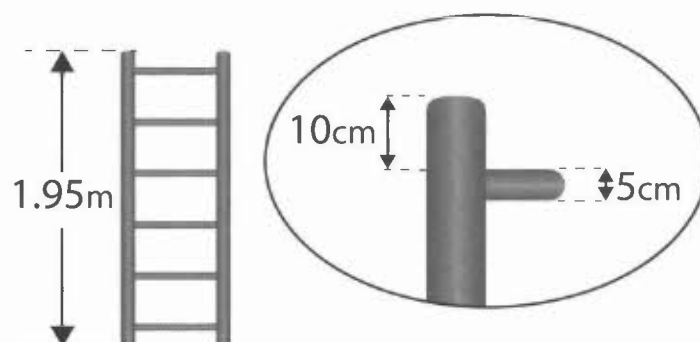
7m

5 Here is a wooden ladder with 6 steps.

The wood extends 10cm **above** the top step and 10cm **below** the bottom step.

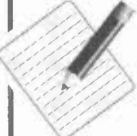
Each wooden step is 5cm thick.

The height of the ladder is 1.95m.

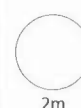


The steps are all the same distance apart.


Work out how far apart they are.



cm



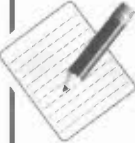
6 A company sells mats. Examples:

2m by 3m mat	5m by 2m mat	4m by 3m mat
 without border £300	 without border £500	 without border £600
 with border £200 more	 with border £280 more	 with border £280 more

The company uses rules to find these costs.

The cost of a mat without a border is based on the **area** of the mat.

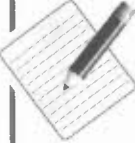
What is the rule?

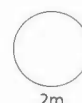




The extra cost for a border is based on the **perimeter** of the mat.

What is this different rule?





TOTAL



National Numeracy Tests

REASONING

8ER17MS

Marking the test

and understanding performance



150302



Llywodraeth Cymru
Welsh Government

Marking the reasoning test

This document comprises:

- the markscheme for the National Numeracy Test (Reasoning) for Year 8 together with marking guidance
- additional information to support teachers' understanding of their learners' responses, providing a platform for growth.

For learners using the modified large print or Braille test materials, some questions have been adapted or replaced. When marking a modified large print or Braille test, please use this markscheme alongside the adapted markscheme which is included in the *Notes for teachers* that accompany the modified tests.

All items within this test require numerical reasoning and therefore most are open, allowing the learner to select what they consider to be an appropriate strategy. This means that there may be a range of ways of arriving at a solution.

As a consequence, marking the reasoning tests may not be as straightforward as simply checking whether or not the final answer is correct since the methods used are also of importance.

Understanding the markscheme

To ensure the accessibility of the markscheme, the focus is primarily on key pointers that indicate the learner's understanding. For example, the markscheme may state 'Shows the value **12**' or 'Links **36** to **9**'.

These values generally credit intermediate stages, showing partial understanding.

Alongside this, commentary is provided as appropriate, to enable markers and teachers to understand their learners' responses and also to support marking.

Common errors are also flagged up, as well as explanations as to why certain responses are awarded partial credit.

Exemplars

To help schools not only with marking but also in interpreting their learners' responses, a range of exemplars is provided for each item, as appropriate.

These exemplars are actual responses from learners (taken from a trial of the reasoning tests) so include spelling mistakes and numerical inaccuracies. They have been typed to ensure anonymity.

Assessing and building on test performance

Marking the test gives teachers an overall score for each learner.

However, this score in isolation is unlikely to provide a great deal of information relating to the strengths of individual learners, or evidence of those areas of numerical understanding and reasoning skills that require improvement.

Equally, comparing learners' scores may mask significant differences in their performance. For example, two learners may both score 12. However, within that overall score Learner A may show a clear ability to communicate effectively but need support to review their work, while Learner B may show the exact opposite.

For this reason, the markscheme and the accompanying materials are designed to provide teachers with a deeper assessment of both individual and class performance.

Diagnostic tool

To assist in interpreting and building on test performance, a diagnostic tool is provided.

This can be accessed via gov.wales/learning

At its simplest level, the diagnostic tool provides markers with a check on the total score for that particular learner.

However, completing the full set of data on each learner gives the teacher an overview of class performance, identifying group or individual strengths and problem areas and hence indicating further teaching needs.

Building on the test: classroom activities

Having assessed learners' ability to apply numerical reasoning and identified areas for both individual and class development, teachers may then wish to build on the test experience and materials through accessing gov.wales/learning

This site provides sample test items and associated markschemes, but also includes additional materials with suggestions for linked classroom activities to extend the learning.

In addition, further activities supporting the learning and teaching of numerical reasoning can be found on gov.wales/learning

Markscheme

General marking rules

It is essential that you apply this markscheme, the marking guidance and the general marking rules given below to your own marking, in order for the standardised scores to be valid.

- The marking guidance shown within the markscheme should be applied to find the relevant score for each question. No half marks are awarded.
- At the end of each double-page spread of marking, record the total number of marks in the 'total' box in the bottom right-hand corner. Check that the mark recorded does not exceed the maximum number of marks available.
- Once the marking has been completed, add up the total number of marks awarded. This is the total score and should be recorded on the cover of the test booklet and input onto the relevant mark sheet on the school's management information system, together with the details and date of the test taken.
- Markers should record their initials on the cover of the test booklet to assist quality assurance.

This data should then be submitted as part of the Welsh National Tests Data Collection (WNTDC). Further details are available from the *National Reading and Numeracy Tests – Test administration handbook 2017* on the Learning Wales website and in *Welsh National Tests Data Collection and reporting arrangements 2016/17* available on the Welsh Government website.

Marking guidance

It is important that the tests are marked accurately. The questions and answers below help to develop a common understanding of how to mark fairly and consistently.

Must learners use the answer boxes?

Provided there is no ambiguity, learners can respond anywhere on the page. If there is more than one answer, the one in the answer box must be marked, even if incorrect. However, if the incorrect answer is clearly because of a transcription error (e.g. 65 has been copied as 56), mark the answer shown in the working.

Does it matter if the learner writes the answer differently from that shown in the markscheme?

Numerically equivalent answers (e.g. eight for 8, or two-quarters or 0.5 for half) should be marked as correct unless the markscheme states otherwise.

How should I mark answers involving money?

Money can be shown in pounds or pence, but a missing zero, e.g. £4.7, should be marked as incorrect unless the markscheme states otherwise.

How should I mark answers involving time?

In the real world, specific times are shown in a multiplicity of ways so accept, for example, 02:30, 2.30, half past 2, etc. Do not accept 2.3 as this is ambiguous. The same principle should be used for marking time intervals, e.g. for two and a half hours accept 2.5 but not 2.5pm.

What if the method is wrong but the answer is correct?

Unless the markscheme states otherwise, correct responses should be marked as correct even if the working is incorrect as learners may have started again without showing their revised approach.

What if the learner has shown understanding but has misread information in the question?

It is important that learners select the appropriate information and review their work. However, for most questions, method marks can still be obtained.

What should I do about crossed-out work?

Working which has been crossed out and not replaced can be marked if it is still legible.

What is the difference between a numerical error and a conceptual error?

A numerical error is one in which a slip is made, e.g. within 86×67 the learner works out $6 \times 7 = 54$ within an otherwise correct response. A conceptual error is a more serious misunderstanding for which no method marks are available, e.g. if 86×60 is recorded as 516 rather than 5160

What if learners use a method that is not shown within the markscheme?

The markscheme shows the most common methods. However, there can be a wide range of approaches to a question and any correct method, however idiosyncratic, is acceptable.

In all questions, the correct answer should be given full marks, whatever the method used, unless the markscheme states otherwise.

Most questions give partial credit for responses that show a correct method but the answer is incorrect or incomplete: a correct method is one that would lead to a correct answer if there were no numerical errors.

8ER17 Reasoning test: Markscheme

Q	Marks	Answer
1i	2m	States that (£) 85 is less than (£) 89.55
		Or Otherwise justifies why it is cheaper, e.g. <ul style="list-style-type: none"> $1.99 - 1.70 = 29p$, so they save $45 \times 29p = £13.05$ but they must buy another 5 at $£1.70 = £8.50$ so they save £4.55
	Or 1m	Shows 85 or 89.55 Or Shows both 45×1.99 and $50 \times 1.7(0)$ Or Shows a method that would justify why it is cheaper with not more than one numerical error

Accept 85 with 89.55 shown without explicit comparison.

However, for 2 marks do not accept an incorrect comparison or incorrect further working

1ii	2m	21 T-shirts
	Or 1m	Shows 20.4 or equivalent Or Answer 20

Accept 20r2

Has rounded down

Question 1i: Exemplars



45 89.55
50 85

Correct; **2 marks**

- The two values are correct and the markscheme allows implicit comparison, so 2 marks can be given. However, this learner needs support to understand the importance of effective numerical communication.



To buy 45 t-shirts - £1.99 each
 $£1.99 \times 45 = £89.55$
 To buy 50 t-shirts - £1.70 each
 $£1.70 \times 50 = £85.00$

they would make more profit buying 50 because they would spend £5.55 less and then they will have 5 extra to sell.

Shows 85 (or 89.55); **1 mark**

- For 2 marks all working must be correct. The difference in cost should be £4.55 not £5.55, so only 1 mark can be given.



Because £1.70 is cheaper than £1.99

Incorrect; **0 marks**

This learner has not multiplied the unit costs by the quantities of T-shirts to be bought.

Question 1ii: Exemplars



$£1.70 \times 60 = £102$ so 60 T-shirts costs £102
 If they sell them for £5 each they will have to sell $102 \div 5 = 21$ T-shirts

T-shirts

Correct; **2 marks**

- The answer is clearly shown in the working.



5¹, 10², 15³, 20⁴, 25⁵, 30⁶, 35⁷, 40⁸, 45⁹,
 50¹⁰, 55¹¹, 60¹², 65¹³, 70¹⁴, 75¹⁵, 80¹⁶, 85¹⁷, 90¹⁸, 95¹⁹, 100²⁰

20 T-shirts

Answer 20; **1 mark**

It is likely that this learner has worked out $60 \times £1.70 = £102$ and is counting on in 5's accordingly. The answer 20 is a common error, ignoring the need to round up.



$60 \div 5 = 12$

12 T-shirts

Incorrect; **0 marks**

This is another common error. The learner needs support in simple problem-solving.

Q	Marks	Answer
1iii	3m	£248 profit
	Or 2m	Shows 387 Or Shows 243 Or Shows a method that would lead to £248 if calculated correctly, including a correct method to find the reduced price
	Or 1m	Shows 144 Or Shows 4.05 or 405




◀ Total from sales

◀ 60 T-shirts at £4.05 each

◀ 32 T-shirts at £4.50 each

◀ Reduced price in £ or pence

Question 1iii: Exemplars


 $100 \times £1.39 = £139$ $10\% \text{ of } 60 = 6 \times 6 = £36$ $10\% \text{ of } £4.50 = £0.45$ $4.50 - 0.45 = £4.05$ $£4.05 \times 60 = £243$ $£4.50 \times 32 = £144$ $243 + 144 = £387$ $387 - 139 = £248$ <div>£ 248 profit</div>	<p>Correct; 3 marks</p> <ul style="list-style-type: none"> This learner shows clear numerical communication.
$4.50 - 0.45 = 4.05$ $4.05 \times 60 = £242$ $4.50 \times 32 = £144$ $242 + 144 = 386$ $386 - 139 = 253$ <div>£ 253 profit</div>	<p>Correct method, including for reduced price; 2 marks</p> <ul style="list-style-type: none"> There are errors in this work: 4.05×60 is £243 not £242 and $386 - 139$ is 247 not 253. Nonetheless, the method would lead to a correct solution so 2 marks can be given.
$10\% = 45\text{p}$ $60 \times 4.05 = £243$ $32 \times 4.50 = 144$ <div> <div>243</div> <div>+144</div> <div>387</div> </div> <div>£ 387 profit</div>	<p>Shows 387; 2 marks</p> <p>Common error The learner has not engaged with the cost of buying 100 T-shirts.</p>
 <div> <div>4.05</div> <div>60 £243</div> <div>4.05</div> </div> <div> <div>4.50</div> <div>32</div> <div>9.00</div> <div>342</div> <div>135.00</div> </div> <div> <div>243</div> <div>135</div> <div>378</div> </div> <div> <div>100 1.39</div> <div>100 13.90</div> </div> <div>£ profit</div>	<p>Shows 243; 2 marks</p> <ul style="list-style-type: none"> The amount received for 60 T-shirts with 10% off is correct, scoring 2 marks, even though there are errors elsewhere and the method is incomplete. However, this learner would benefit from understanding when it is appropriate to use a calculator and why.
 $100 \times 1.39 = £139.00$ $4.50 \div 10 = 0.45\text{p (10\%)}$ $60 \times 0.45 = £27$ $32 \times 4.50 = £144$ $171 - 139 = 32$ $27 + 144 = £171$ <div>£ 32 profit</div>	<p>Shows 144; 1 mark</p> <ul style="list-style-type: none"> The cost of the reduced T-shirt is taken to be £0.45 (10%) rather than £4.05 (90%). As a correct method for finding the reduced price is not shown only 1 mark can be given.

Q	Marks	Answer
4	3m	Both correct, i.e. bus £6.75 plane £7.75
	Or 2m	One correct Or Correct values but in incorrect order, i.e. bus £7.75 plane £6.75 Or Shows a method, other than trial and improvement, that would lead to both correct answers if calculated correctly, e.g. <ul style="list-style-type: none"> • $14.5 + 14.5 + \text{bus} = 35.75$, so $\text{bus} = 35.75 - 29 = 6.5$ (error), $\text{plane} = 14.5 - 6.5 = 7.5$ (error)
	Or 1m	Shows a method, other than trial and improvement, that would lead to one correct answer if calculated correctly Or Shows the correct totals for three buses and two planes for at least three trials, using £14.50 as the total of their bus and plane, e.g. <ul style="list-style-type: none"> • Bus 7, plane 7.50, total 36 Bus 8.50, plane 6, total 37.5 Bus 8, plane 6.5, total 37

For 3 marks or 2 marks, accept total costs given, i.e. bus £20.25, plane £15.50

Do not accept trials in which bus = £0 or plane = £0

Question 4: Exemplars

<p> $35.75 - 29 = 6.75$ yellow bus = 6.75 $14.50 - 6.75 = 7.75$ Green plane = 6.75 7.75 </p> <div>  <input type="text" value="£"/> </div> <div>  <input type="text" value="£"/> </div>	<p>Correct; 3 marks</p> <p>Efficient method This learner uses the efficient method of doubling the total cost of a bus and a plane, then subtracting from £35.75 to find the cost of the bus. The answers are unambiguously shown within the working.</p>
<p> $x + y + x + y + x = 35.75$ $3x + 2y = 35.75$ $x + y = 14.50$ $\times 3$ $3x + 3y = 43.50$ $43.50 - 35.75 = 7.75$ $7.75 + 6.75 = 14.50$ </p> <div>  <input type="text" value="£ 7.75"/> </div> <div>  <input type="text" value="£ 6.75"/> </div>	<p>Incorrect order; 2 marks</p> <p>Efficient method This work shows another efficient method, but the learner has become confused as to which cost belongs to which item.</p>
<p> $14.5 \times 2 = 29$ $35.75 - 29 = 6.75$ $6.75 \times 3 = 19.35$ $35.75 - 19.35 = 16.4$ $16.4 \div 2 = 8.2$ </p> <div>  <input type="text" value="£ 6.75"/> </div> <div>  <input type="text" value="£ 8.20"/> </div>	<p>Bus £6.75; 2 marks</p> <ul style="list-style-type: none"> The method is correct, but there is an error in multiplying 6.75 by 3. This learner should have realised that something must be wrong since their answers do not sum to £14.50
<p> $b + p = £14.50$ $3b + 3p = 14.50 \times 3 = 42.50$ $3b + 2p = 35.75$ $50p = 42.50 - 35.75 = £5.25$ </p> <div>  <input type="text" value="£"/> </div> <div>  <input type="text" value="£"/> </div>	<p>Correct method to find one cost; 1 mark</p> <ul style="list-style-type: none"> Although there are numerical errors in this work, the method would lead to the correct cost of the plane.
<p> $7 = \text{Bus}$ $7.50 = \text{Plane}$ $7.50 \times 3 = 22.50$ $7 \times 2 = 14$ 8.50 $7.25 \times 3 = 21.75$ $7.25 \times 2 = 14.50$ 36.25 </p> <div>  <input type="text" value="£"/> </div> <div>  <input type="text" value="£"/> </div>	<p>Incorrect; 0 marks</p> <ul style="list-style-type: none"> This learner uses trial and improvement. All three pairs of initial values sum to 14.50 and two of the totals are correct, but in one set the difference, not the sum, has been found. As only two trials are correct no marks can be given.
<p> $\text{bus} = £$ $\text{plane} = £$ $3 \text{ bus} = £21.45$ $£14.30 \text{ left} = £7.15$ $\frac{7.15}{2} =$ </p> <div>  <input type="text" value="£ 7.25"/> </div> <div>  <input type="text" value="£ 7.15"/> </div>	<p>Incorrect; 0 marks</p> <p>Common error It is a common error to divide by 2 and/or by 5, assuming that the cost of the bus is equal to the cost of the plane. The method is incorrect and no marks can be given.</p>

Q	Marks	Answer	
5	2m	29 cm	◀ Accept 29 rounded to 30 only if 29, or a correct method with no errors, is shown
	Or 1m	Shows 0.29	◀ Distances apart in m
		Or	
		Shows 145 or 1.45	◀ Sum of the distances apart, in cm or m
		Or	
		Shows a method, including conversion of units, that would lead to 29cm if calculated correctly, e.g.	◀ Do not accept incorrect conversion of units
		<ul style="list-style-type: none"> • $1.95 - 0.2 - 0.3 = 1.55$ (error) $1.55 \div 5 = 0.31$ Answer 31cm 	

Question 5: Exemplars



$195 - (20 + 5 \times 6) = 145\text{cm}$
 There are 6 rungs but only 5 gaps so
 $145 \div 5 = 29\text{cm}$

Correct; **2 marks**

- The numerical communication is very clear and the answer is clearly shown within the working.



$5 \times 20 = 100$ $100 + 20 + 30 = 150$ too small
 $5 \times 25 = 125$ $125 + 50 = 175$ too small
 $5 \times 30 = 150$ 200 too big
 $5 \times 29 = 145$ 195 ✓

29 cm

Correct; **2 marks**

- This learner trials different values for the distance apart. Although it leads to the correct answer the method is inefficient. Had the correct answer not been found, they would have scored 0 marks.



20cm for the tops
 30 for the steps because $5 \times 6 = 30$
 50cm altogether
 1.45 left for the holes
 $1.45 \div 6 = 0.2416666667$

24 cm

Shows 1.45; **1 mark**



Dividing by 6 (the number of steps) rather than 5 (the number of gaps) is a very common error.



$195 - 10 - 10 = 175$
 $6 \times 5 = 35$
 $175 - 35 = 140$
 $140 \div 5 = 28\text{cm}$

28 cm

Correct method; **1 mark**

- There is a slip in multiplying 6 by 5, but the method, including conversion of units, is otherwise correct.

$1950 - 20 - 30 = 1900$
 $1900 \div 5 = 380$

380 cm

Incorrect; **0 marks**

- Although much of the method is correct, there is an error in converting 1.95m to cm. No marks can be given.

Q	Marks	Answer
6i	2m	<p>Gives a correct rule that links to area, e.g.</p> <ul style="list-style-type: none"> • Area in $m^2 \times £50$ • Area $\times 50$ <p>Or</p> <p>Gives a correct rule that links to unit area, e.g.</p> <ul style="list-style-type: none"> • £50 per m^2 • 0.5p per cm^2
	Or 1m	<p>The only error is to write m for m^2, or cm for cm^2, within their rule, or to omit m^2 or cm^2 in their rule for unit area</p> <p>Or</p> <ul style="list-style-type: none"> • Shows 6, 10 and 12

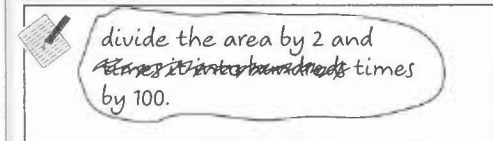
m^2 can be assumed, as can £, but for 2 marks do not accept incorrect units within their rule, e.g.

- Area in $m \times 50$
- Area $\times 50p$

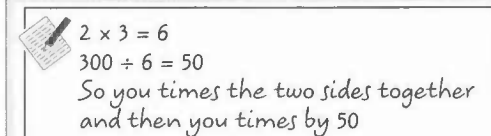
For unit area £ can be assumed but not pence, and for 2 marks m^2 or cm^2 , or equivalent, must be present and correct

Area in m^2 of each mat
Ignore incorrect or omitted units

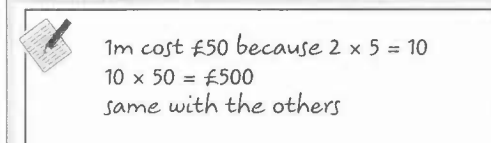
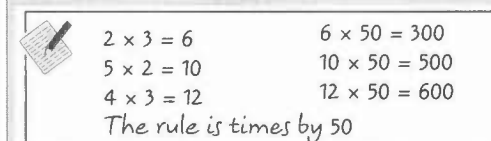
Question 6i: Exemplars


Correct; **2 marks**

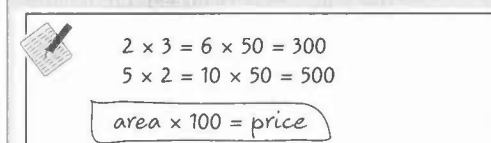
- Area $\div 2 \times 100$ is equivalent to area $\times 50$ and omission of the £ sign is condoned.


Correct; **2 marks**

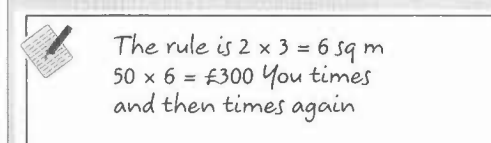
- 'You times the two sides together' can be taken to imply area. Even though there is no evidence that the rule works for the other mats, 2 marks can be given.


Correct other than units for m²; **1 mark**Their rule '1m cost £50' should be '1m² cost £50'.

Areas 6, 10, 12; **1 mark**

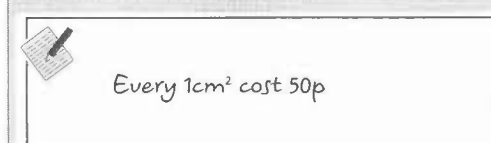
- Their rule is incomplete as what is 'times by 50' is not explicit, so only 1 mark can be given for the correct areas seen.


Incorrect; **0 marks**

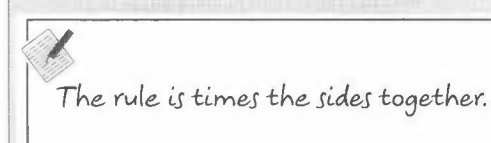
- 'Area $\times 100$ = price' is incorrect and only two of the three areas (6 and 10) have been found.


Incorrect; **0 marks**

- The rule 'you times and then times again' is insufficient to gain credit and only one area is shown, so no marks can be given.


Incorrect; **0 marks**

- The cost is incorrect as 1cm² costs 0.5p.


Incorrect; **0 marks**

It is a common error to give the rule for finding the area of a rectangle rather than engaging with costs.

Q	Marks	Answer
6ii	2m	<p>Gives a correct rule that links to perimeter, e.g.</p> <ul style="list-style-type: none"> • Perimeter in m \times £20
		<ul style="list-style-type: none"> • Perimeter \times 20 • $2 \times \text{length} + 2 \times \text{width}$, then \times 20 • Length + width, then \times 40 <p>Or</p> <p>Gives a correct rule that links to unit perimeter, e.g.</p> <ul style="list-style-type: none"> • £20 per m • 20p per cm
	Or 1m	<p>The only error is to write m^2 for m or cm^2 for cm within their rule, or to omit m or cm in their rule for unit perimeter</p> <p>Or</p> <p>The only error is to omit brackets or equivalent within their otherwise correct rule, e.g.</p> <ul style="list-style-type: none"> • $20 \times 2 \times \text{length} + 2 \times \text{width}$ <p>Or</p> <p>Shows 10, 14 and 14</p>








m can be assumed, as can £, but for 2 marks do not accept incorrect units within their rule, e.g.

- Perimeter in $\text{m}^2 \times 20$

For unit perimeter £ can be assumed but not pence, and for 2 marks m or cm must be present and correct

Perimeter in m of each mat
Ignore incorrect or omitted units

Question 6ii: Exemplars

 <p>£20 per 1m of border</p>	Correct; 2 marks									
 <p>2m by 3m is £200 more 4m by 3m is £280 more so it's £80 for the other 4m so each meter of the perimeter is £20</p>	Correct; 2 marks <ul style="list-style-type: none">This learner uses the relationship between two of the mats: the perimeter of the 4m by 3m mat is 4m more than the perimeter of the 2m by 3m mat. The incorrect spelling of metre can be ignored.									
 <p>the rule for the cost with a border is they find the perimeter, double it (x2) then multiply it by 10 and that is the price more</p>	Correct; 2 marks <ul style="list-style-type: none">Perimeter $\times 2 \times 10$ is equivalent to perimeter $\times 20$, and omission of the £ sign is condoned.									
 <p>$3 + 2 + 2 + 3 = 10$ $200 \div 10 = 20$ Each one of the perimeter = £20</p>	Metres omitted in rule for unit perimeter; 1 mark									
 <p>$2 + 3 + 3 + 2 = 10\text{m}$ $200 \div 5 = £40$ $5 + 2 + 2 + 5 = 14\text{m}$ $280 \div 7 = £40$ $4 + 3 + 3 + 4 = 14\text{m}$ $280 \div 7 = £40$ <u>$2\text{m} = £40.00$</u></p>	Shows 10, 14, 14; 1 mark <ul style="list-style-type: none">Why this learner divides by 5, 7 and 7 rather than the perimeters is unknown, but as their rule does not link to perimeter only 1 mark can be given for showing the correct perimeters.									
 <p>Width + Height $\times 10 \times 4 = \text{Extra Cost}$</p>	Brackets omitted; 1 mark <ul style="list-style-type: none">This learner needs support to understand order of operations.									
 <table><tr><td>200</td><td>280</td><td>280</td></tr><tr><td>$3 + 2 = 5$</td><td>$2 + 5 = 7$</td><td>$3 + 4 = 7$</td></tr><tr><td>$200 \div 5 = 40$</td><td>$280 \div 7 = 40$</td><td>$280 \div 7 = 40$</td></tr></table> <p>So the rule is $\times 40$</p>	200	280	280	$3 + 2 = 5$	$2 + 5 = 7$	$3 + 4 = 7$	$200 \div 5 = 40$	$280 \div 7 = 40$	$280 \div 7 = 40$	Incomplete; 0 marks <ul style="list-style-type: none">This learner, perhaps unknowingly, is working with semi-perimeters, but what is $\times 40$ is not made clear so no marks can be given.
200	280	280								
$3 + 2 = 5$	$2 + 5 = 7$	$3 + 4 = 7$								
$200 \div 5 = 40$	$280 \div 7 = 40$	$280 \div 7 = 40$								

