

National Numeracy Tests

REASONING

2ER17

First name _____

Last name _____

School _____

Class _____

Date of birth ○○ ○○ ○○○○

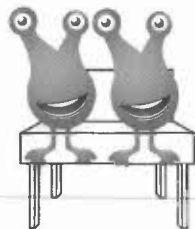
Date of test ○○ (05) (2017)

Total score (maximum 20)

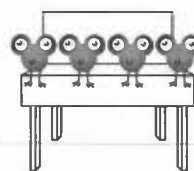


Llywodraeth Cymru
Welsh Government

1 2 Bigs



4 Littles



The space taxi has 5 seats.



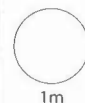
How many **Bigs** can fit on 5 seats?

Bigs



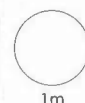
How many **Littles** can fit on 5 seats?

Littles



Can 9 Bigs with 2 Littles fit on 5 seats?

Show how you know.



2 Tickets for the space taxi:



1 **Big** pays 10 ibs

10



1 **Little** pays 5 ibs

5

Who pays exactly 30 ibs?

30 ibs for Big with Littles

or

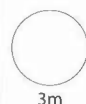
30 ibs for Bigs with Littles

or

30 ibs for Bigs with Littles

or

30 ibs for Bigs with Littles



3m

TOTAL



6m

3

Each Big builds 4 sandcastles.

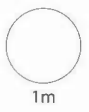


Each Little builds 2 sandcastles.




1 Big and 2 Littles

build sandcastles.



2 Bigs and 5 Littles

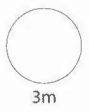
build sandcastles.

Each sandcastle needs 2 flags. 

How many **flags** do they need?

Show how you work it out.

flags



1 Tim has:



a red scarf

a blue scarf

a red hat

a blue hat

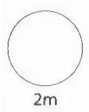
Show all the ways to put 1 scarf and 1 hat on the snowman.

a scarf and a hat

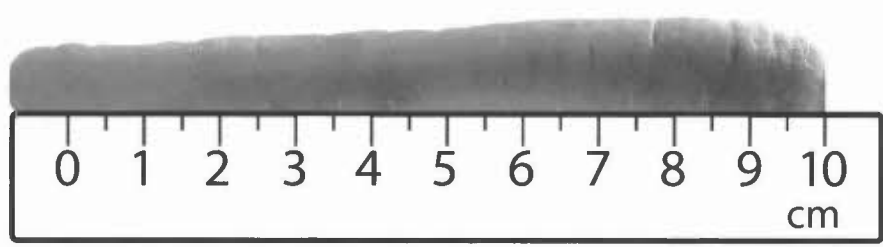
or a scarf and a hat

or a scarf and a hat

or a scarf and a hat



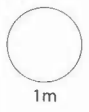
2 This carrot is the snowman's nose.



Erin says the carrot is 10cm long.

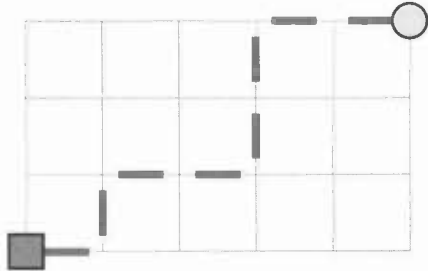
Explain why she is **wrong**.

Handwriting practice box with a notepad and pencil icon.

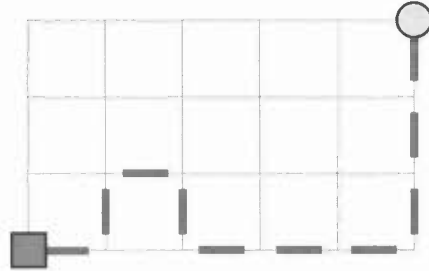


3 Each day Spot moves from ■ to ○

Spot takes 8 steps.



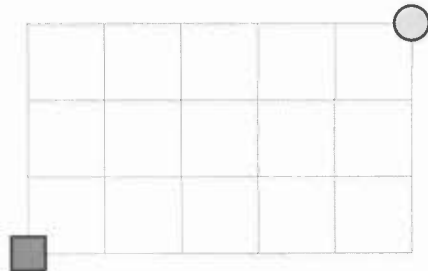
Spot takes 10 steps.



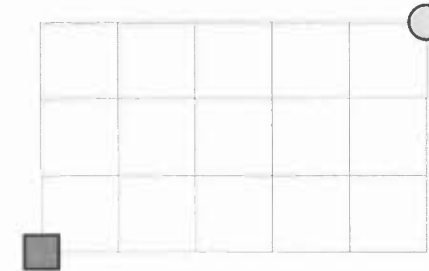
How else can Spot move from ■ to ○?

Draw on the lines.

Spot takes 8 steps.



Spot takes 10 steps.

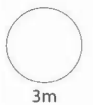


When Spot takes 2 steps — —

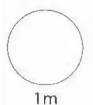
Erin takes 1 step. ———

Spot takes 12 steps.

Erin takes steps.



3m



1m

TOTAL



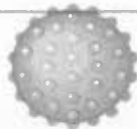
7m

- 4 Tim's and Erin's snowman is the best. They win £1

Sale



bowl 50p



ball 25p



bone 30p

They have £1

Can they buy 1 bowl and 2 bones?

Show how you work it out.

1m

What can they buy for exactly £1 in the sale?

Give two different answers.

exactly £1 for

or exactly £1 for

2m

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National Numeracy Tests

REASONING

2ER17MS

Marking the test

and understanding performance



150234



Llywodraeth Cymru
Welsh Government

2ER17 Reasoning test: Markscheme (Aliens go on holiday)

Q	Marks	Answer
1i	1m	10 Bigs

1ii	1m	<p>20 Littles</p> <p>Or</p> <p>The answers to part i and part ii are transposed, i.e. 20 Bigs then 10 Littles</p>
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1iii	1m	<p>Shows how they know the aliens can fit, e.g.</p> <ul style="list-style-type: none"> • BB BB BB BB BLL
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Provided the decision 'Yes' is stated or clearly implied, accept reference to only the shared seat, e.g. accept

- Yes, 2 Littles sit with a Big

Q	Marks	Answer
2	3m	All three possible groups of aliens, in any order, i.e. 0 Bigs with 6 Littles 3 Bigs with 0 Littles 2 Bigs with 2 Littles
	Or 2m	Any two possible groups
	Or 1m	Any one possible group

← Accept 0 left blank

Q	Marks	Answer
3i	1m	8 sandcastles

3ii	3m	36 flags
	Or 2m	Shows or implies that there are 18 sandcastles Or Shows a method that would lead to 36 flags if calculated correctly, with not more than one numerical error, e.g. <ul style="list-style-type: none"> • $16 + 20$ (number of flags for Bigs and for Littles) • $4 + 4 = 7$ (error) $5 \times 2 = 10$ $7 + 10 = 17$ $17 + 17 = 34$
	Or 1m	Shows or implies either of the following: <p>2 Bigs need 16 flags 5 Littles need 20 flags</p> Or Shows a method that would lead to 36 flags if calculated correctly, with not more than two numerical errors

Unless $\times 2$ or equivalent is shown, the intent to double can be assumed only if the doubling is correct

2ER17 Reasoning test: Markscheme (Who stole the snowman's hat?)

Q	Marks	Answer
1	2m	Gives all three correct pairs, in any order, i.e. red scarf, red hat blue scarf, red hat blue scarf, blue hat
	Or 1m	Gives any two correct pairs

Q	Marks	Answer
2	1m	Gives a correct length (more than 10 or less than or equal to 11)
		Or Identifies the need to start measuring at zero, e.g. <ul style="list-style-type: none"> • They should start the carrot at 0 • The ruler should start at 0

Do not accept vague responses, e.g.

- It is longer than 10

Accept 'beginning' to indicate zero, e.g.


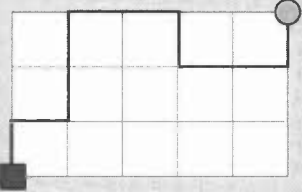
- Carrot should be at the beginning

Accept a correct response followed by an incorrect length, e.g.

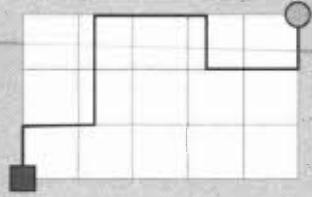
- It's not at the beginning it is 12cm

Do not accept vague or ambiguous responses, e.g.

- It didn't start in the right place

Q	Marks	Answer
3i	3m	Shows two correct routes, e.g. <ul style="list-style-type: none"> • 8 steps  10 steps 
	Or 2m	The 10-step route is correct
	Or 1m	The 8-step route is correct Or Their routes would both be correct but are transposed

Accept gridlines not used only if the lines are clearly intended to be horizontal and vertical, e.g. for 10 steps accept



For the 10-step route do not accept part of a route retraced unless it is clearly marked as such

Throughout, do not accept repetition of the 8-step route and 10-step route drawn for them

3ii	1m	6 steps
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Q	Marks	Answer
4i	1m	Shows why they cannot all be bought with £1, e.g. <ul style="list-style-type: none"> • No, it is £1.10 • They need another 10p • $50 + 30 = 80$ so they only have 20 left but the bone costs 30

Accept 1.10 or 110 as correct justification even if the decision is omitted, but do not accept £110 and/or an incorrect decision

4ii	2m	Gives two correct solutions from the three below: <p>2 bowls 1 bowl and 2 balls 4 balls</p>
	Or 1m	Gives one correct solution