

REASONING

6ER17

First name _____

Last name _____

School _____

Class _____

Date of birth

Date of test

Total score (maximum 20)



150281



Llywodraeth Cymru
Welsh Government

1

Rules
dog beats cat
cat beats mouse
mouse beats dog



Scoring each round
win: 2 points
draw: 1 point each
lose: 0 points

After 2 rounds, what could the scores be?

Show all possible pairs of answers. One pair is done for you.

Rhian's score	Tom's score
0	4


2m

After 8 rounds, Rhian says:



I won 6 and drew 1 of the 8 rounds.

What are their scores?



Rhian points

Tom points


2m

Rules
dog beats cat
cat beats mouse
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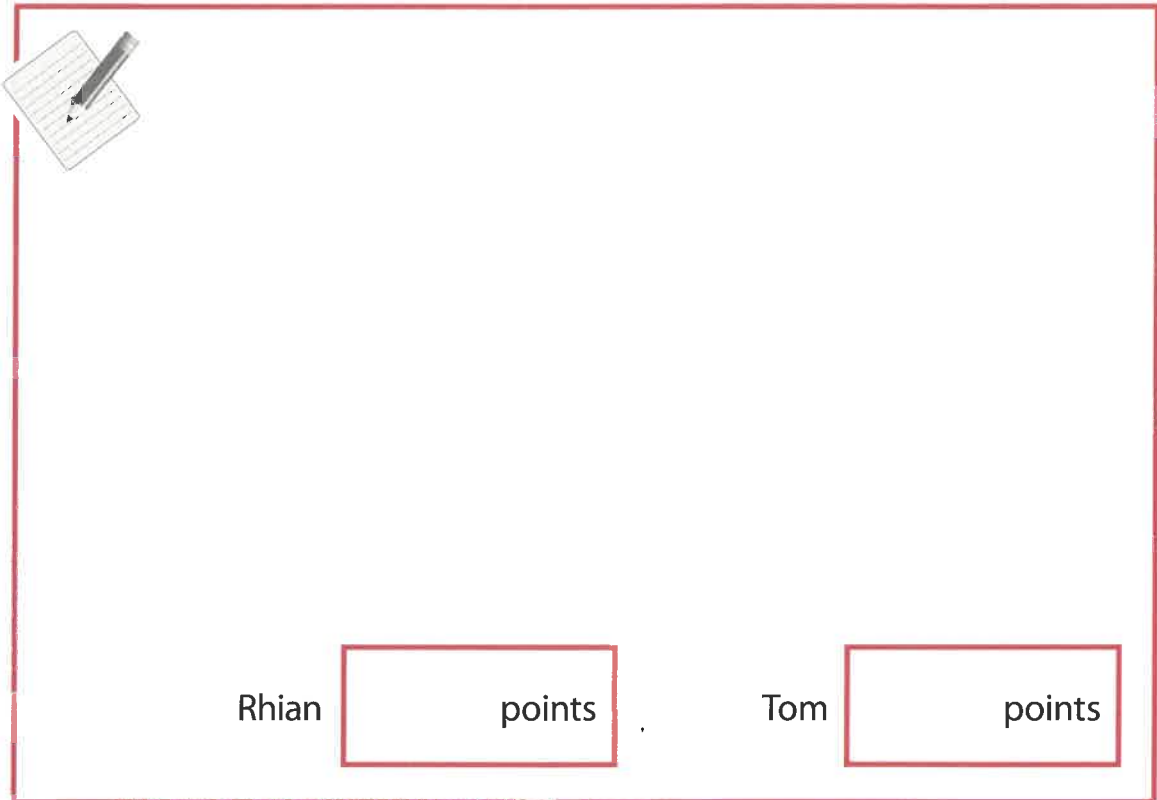
Scoring each round
win: 2 points
draw: 1 point each
lose: 0 points

The next day they play again, starting with a score of 0

Rhian  I will always choose in this order: **dog, cat, mouse, dog, cat, mouse,** and so on.

Tom  I will always choose **cat.**

What are their scores after 15 rounds?



Rhian points

Tom points

2 Meg sells birthday cakes with candles to show the ages, e.g.



Information about the candles:



Meg makes one cake for each year from age 1 to age 16

Altogether, how much do the candles cost?

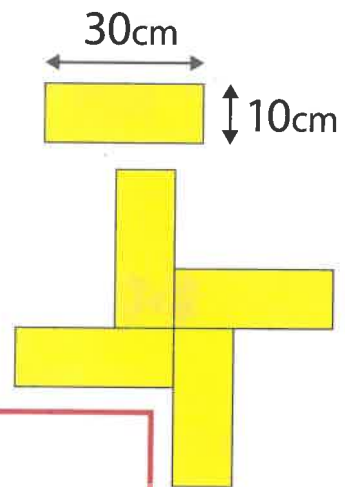
£

2m

- 3 Jac has four identical rectangles.
Each measures 30cm by 10cm.

He uses them to make this 'windmill' shape.



Work out the **perimeter** of the shape.



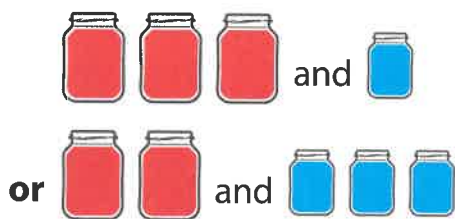


cm


2m

- 4 The bear has big jars  and small jars  and a large pot of honey.

The pot of honey could fill



How many **small** jars could the pot of honey fill?



small jars

2m

TOTAL

6m

5



and





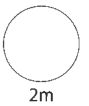
represent numbers.

$$\triangle + \square = 20$$

$$\triangle - \square = 6$$

What are the numbers?

 =  =



2m



and





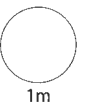
represent other numbers.

$$\bigcirc + \star = 20$$

$$\bigcirc - \star = 7$$

What are the numbers?

 =  =




1m

- 6 Year 6 children buy St David's day mugs, and pencils to put in the mugs. Then they sell the mugs and pencils and give the profit to charity.

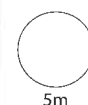
What the children buy	Small mug 	Big mug 	Pencils 
Cost	£1.95 each	£2.85 each	10p each
Number	20	15	170

What the children sell	Small mug with 4 pencils 	Big mug with 6 pencils 
Price	£3.50 each	£5.50 each
Number	19	13

How much money do the children give to charity?



£



5m

TOTAL



8m