

## Hot Reasoning Week 5 Year 5

Q1.



**30** children are going on a trip.

It costs **£5** including lunch.

Some children take their own packed lunch.

They pay only **£3**

The 30 children pay a total of **£110**

How many children are taking their own packed lunch?

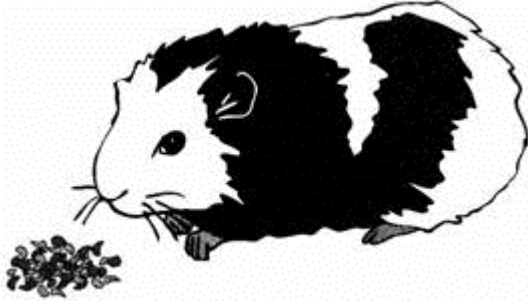
Show your **working**.  
You may get a mark

children

2 marks

**Q2.** A packet contains **1.5 kilograms** of guinea pig food.

Remi feeds her guinea pig **30 grams** of food each day.



How many days does the packet of food last?

Show your **working**. You may get a mark

days

A large rectangular box intended for the student to show their working. In the top-left corner of the box is a small pencil icon. On the left side of the box, there is a speech bubble containing the text "Show your **working**. You may get a mark". At the bottom-right corner of the box, there is a smaller rectangular box containing the word "days".

2 marks

Q3.



Every **100g** of brown bread contains **6g** of fibre.

A loaf of bread weighs 800g and has 20 equal slices.

How much fibre is there in **one** slice?



Show  
your **working**.  
You may get  
a mark

A large rectangular box for showing working. In the bottom right corner of this box, there is a smaller rectangular box containing the letter 'g'.

2 marks

Q14.



Here is part of a train timetable.

Edinburgh	-	09:35	-	-	13:35	-	-
Glasgow	09:15	-	11:15	13:15	-	13:45	15:15
Stirling	09:57	-	11:57	13:57	-	14:29	15:57
Perth	10:34	10:51	12:34	14:34	14:50	15:15	16:35
Inverness	-	13:10	-	-	17:05	-	-

How long does the first train from Edinburgh take to travel to Inverness?

1 mark

Ellen is at Glasgow station at 1.30pm.

She wants to travel to Perth.

She catches the next train.

At what time will she arrive in Perth?

1 mark

**Q5.** Liam thinks of a number.

He **multiplies the number by 5** and then **subtracts 60** from the result.

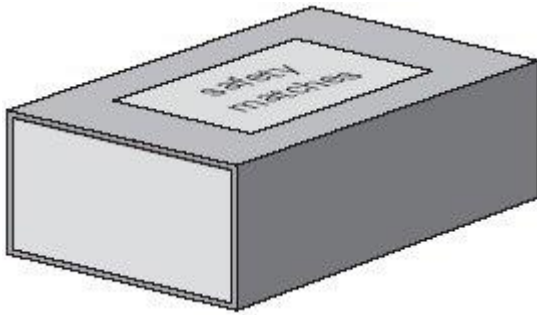
His answer equals the number he started with.

What was the number Liam started with?

Show your **working**.  
You may get a mark

2 marks

Q6.



A box contains 220 matches and weighs 45 grams.

The empty box weighs 12 grams.

Calculate the weight of **one** match.



Show  
your **working**.  
You may get  
a mark

A large rectangular box for showing working. In the bottom right corner, there is a smaller rectangular box containing the letter 'g'.

2 marks

## ANSWERS!

**M1.** Award **TWO** marks for the correct answer of 20

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

- $30 \times £5 = £150$   
 $£150 - £110 = £40$   
 $£40 \div £2 = 20$
- $£110 \div 30 = £3$  each, with £20 left over  
 $£20 \div £2 = 10$   
 $30 - 10 = 20$

**OR**

a trial and improvement method, eg

- $30 \times £3 = £90$   
 $10 \times £3 + 20 \times £5 = £130$   
 $15 \times £3 + 15 \times £5 = £120$

**Calculation must be performed for the award of ONE mark.**

*A 'trial and improvement' method must show evidence of improvement, but a final answer need not be reached for the award of **ONE** mark.*

Up to 2 (U2)

[2]

**M2.** Award **TWO** marks for the correct answer of 50

If the answer is incorrect, award **ONE** mark for evidence of appropriate working using common units, eg

- $1500 \div 30 =$  wrong answer

**Calculation must be performed for the award of ONE mark.**

**Do not** accept  $1.5 \div 30$  as evidence of appropriate working.

Up to 2

[2]

**M3.** Award **TWO** marks for the correct answer of 2.4

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

$$6 \times 8 = 48 \text{ (48g fibre in one loaf)}$$

$$48 \div 20$$

**OR**

$$800 \div 20 = 40 \text{ (one slice weighs 40g)}$$

$$6\% \text{ of } 40$$

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

[2]

**M4.** (a) 3 hours 35 minutes

*The answer is a time interval  
(see guidance)*

1

(b) 15:15

*The answer is a specific time  
(see guidance)  
Accept quarter past three*

1

[2]

**M5.** Award **TWO** marks for the correct answer of 15

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

- $60 \div 4 =$  wrong answer

*Calculation must be performed for the award of **ONE** mark.*

**OR**

- a 'trial and improvement' method.

eg

$$30 \times 5 - 60 = 90$$

$$10 \times 5 - 60 = -10$$

$$20 \times 5 - 60 = 40$$

**OR**

- $5x - 60 = x$

$x =$  wrong answer

*A 'trial and improvement' method must show*



*evidence of improvement, but a final answer need not be reached for the award of **ONE** mark.*

Up to 2 (U1)

[2]

**M6.** Award **TWO** marks for the correct answer of 0.15

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg

$$45 - 12 = 33$$

$$33 \div 220$$

*Accept equivalent fractions, eg  $\frac{3}{20}$*

*Accept for **ONE** mark 0.015 **OR** 15*

***OR** 1.5 **OR** 150 as evidence of appropriate method.*

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2