

## Reasoning: Division 1

Q1.



The International Space Station orbits the Earth at a height of 250 miles.

What is the height of the International Space Station in **kilometres**?

Use 8 kilometres equals 5 miles.

 km

1 mark

Q2.

Write in the missing number.

$$50 \div \square = 2.5$$

1 mark

Q3.

Each of these bags contains **£1.60**

Each bag contains only one type of coin.



Complete this table to show how many coins are in each bag.

One has been done for you.

Type of coin	Number of coins
<b>1p</b>	<b>160</b>
<b>10p</b>	
<b>20p</b>	

1 mark

**Q4.**

Join each box to the correct number.

One has been done for you.

$6 \times 5$	30
half of 98	32
double $4 \times 4$	44
	49

1 mark

**Q5.**

Write the missing number.

$$12.5 \div \boxed{\phantom{000}} = 7.5 \div 1.5$$

1 mark

**Q6.**

This table shows the areas of the United Kingdom and Jamaica.

Country	Area (square kilometres)
United Kingdom	240,000
Jamaica	10,000

The area of the United Kingdom is larger than the area of Jamaica.

How many times larger is the United Kingdom?

**times larger**

1 mark

**Q7.**

What is 444 minutes in hours and minutes?

**hours**

**minutes**

1 mark

**Q8.**

Amina's bed is 190 cm in length and 91 cm in width.

She is making a **one-tenth** scale model of the bed.

What are the length and width of Amina's model?

length =  **cm**



$11 \times 12$	<input type="text"/>	$15 \times 10$
$90 \div 30$	<input type="text"/>	$60 \div 20$
$120 \div 4$	<input type="text"/>	$160 \div 8$
$30 \times 8$	<input type="text"/>	$100 \times 10$

2 marks

**Q11.**

A farmer is packing eggs.

Each box holds **six** eggs.



The farmer has 980 eggs to pack.

How many boxes can the farmer **fill** using 980 eggs?

1 mark

How many eggs will be left over?

1 mark

**Q12.**

A group of friends earns £80 by washing cars.

They share the money **equally**.

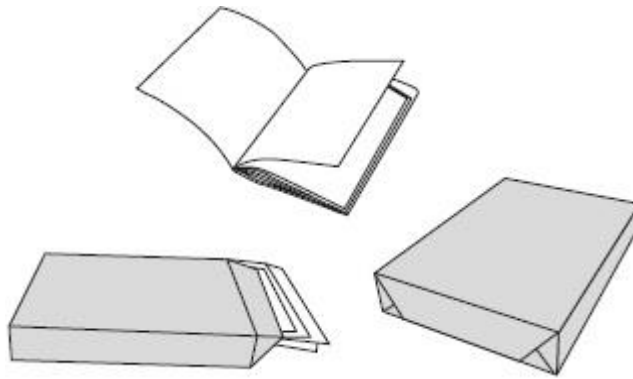
They get £16 each.

How many friends are in the group?

1 mark

### Q13.

Adam is making booklets.



Each booklet must have **34** sheets of paper.

He has **2** packets of paper.

There are **500** sheets of paper in each packet.

How many complete booklets can Adam make from **2** packets of paper?

Show your method																											
																									<b>booklets</b>		

2 marks

### Q14.

Write the missing number.



## Mark schemes

**Q1.**

400

[1]

**Q2.**

20

[1]

**Q3.**

Table completed as shown:

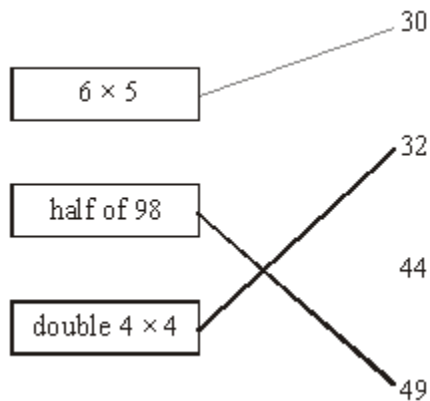
Type of coin	Number of coins
1p	160
10p	<b>16</b>
20p	<b>8</b>

***Both numbers must be correct for the award of the mark.***

[1]

**Q4.**

Two lines drawn as shown:



***Do not*** award the mark if additional incorrect lines are drawn.

*Lines need not touch the boxes or numbers, provided the intention is clear.*

[1]

**Q5.**

2.5

*Accept equivalent fractions or decimals*



[1]

**Q6.**

24

[1]

**Q7.**

7 hours and 24 minutes

[1]

**Q8.**

Award **ONE** mark for two correct answers, as shown:

length =

width =

[1]

**Q9.**

Award **TWO** marks for the correct answer of £1.68

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $20 - 14.96 = 5.04$   
 $5.04 \div 3$

*Accept for **ONE** mark an answer of £168 OR £168p as evidence of an appropriate method.*

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

Up to 2m

[2]

**Q10.**

Award **TWO** marks for all symbols correct, as shown:

$11 \times 12$	<input type="text" value="&lt;"/>	$15 \times 10$
$90 \div 30$	<input "="" type="text" value="="/>	$60 \div 20$
$120 \div 4$	<input type="text" value="&gt;"/>	$160 \div 8$
$30 \times 8$	<input type="text" value="&lt;"/>	$100 \times 10$

Award **ONE** mark for any three symbols correct.

Up to 2 marks

[2]

**Q11.**

(a) 163

1

(b) 2

1

[2]

**Q12.**

5

[1]

**Q13.**Award **TWO** marks for the correct answer of 29If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $2 \times 500 = 1,000$   
 $1,000 \div 34 =$

**OR**

- $2 \times 500 \div 34 =$

**OR**

- $500 \div 34 = 14 \text{ r}23$  (*error*)  
 $14 \text{ r}23 \times 2 = 28 \text{ r}46$

**OR**

- $34 \times 10 = 340$   
 $34 \times 30 = 1,020$

Answer = 30 booklets (*error*)*Answer need not be obtained for the award of **ONE** mark.**Answer does not need to have been rounded or rounded correctly for the award of **ONE** mark.**If a pupil reaches a non-integer answer, for example 28 r2 and expresses it as 28.2 without further working, this is considered a notation error and is condoned.**Within an appropriate method, if the pupil's remainder from 500 divided by 34 is less than 17 and this remainder is ignored before doubling, this is acceptable for **ONE** mark. If the pupil's remainder is 17 or more and it has been ignored before doubling, this is **not** acceptable for **ONE** mark.***Do not** accept a trial and improvement method.

Up to 2 marks

[2]

**Q14.**

**Q15.**

Award **TWO** marks for the correct answer of 3.75

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $60 \div 4 = 15$
- $250 \times 15 = 3750$
- $3750 \text{ ml} \div 1000 =$

**OR**

- $250 \div 4 = 62.5 \text{ ml per second}$
- $62.5 \times 60 = 3750$
- $3750 \text{ ml} \div 1000 =$

**OR**

- $60 \div 4 = 15$ , so there are 15 lots of 4 seconds in 1 minute so there are 15 bottles per minute.
- There are 4 bottles in 1 litre
- $15 \div 4 =$

*Accept for **TWO** marks, 3,750 ml for final answer in working and the answer box blank **OR** 3,750 in the answer box where the litres has been replaced with millilitres.*

*Accept for **ONE** mark 3,750 litres (l) in the answer box **OR** the final answer in working and answer box blank.*

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

Up to 2m