Test base

Q1.

Jack chose a number.

He multiplied the number by 7

Then he added 85

His answer was 953

What number did Jack choose?

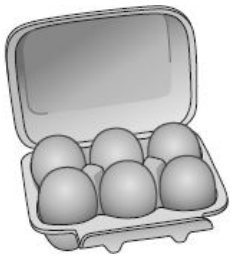
Show your method

2 marks

Q2.

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?

full boxes

1 mark

How many eggs will be left over?

left over

1 mark

Q3.

A spoonful is **5ml.**

How many spoonfuls can you get from this bottle?

1 mark

Q4.

96 pupils and teachers go by minibus to the sports tournament.
How many 15-seater minibuses will be required?

minibuses

1 mark

Q5.

There are 275 children in Fernley School.
They get into groups of eight.

What is the largest number of groups of eight that they can make?

groups

1 mark

Q6.

Complete the number sentences.

340 ÷ 7 = ☐ remainder ☐

1 mark

☐ ÷ 3 = 295 remainder 2

1 mark

Mark schemes

Q1.

Award **TWO** marks for the correct answer of 124

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

- 953 − 85 = 868
  868 ÷ 7

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

If the pupil's evaluation contradicts the appropriate method, the method mark will not be awarded.

Up to 2m

[2]

Q2.

(a) 163

1

(b) 2

1

[2]

Q3.

75 (spoonfuls)

[1]

Q4.

7

[1]

Q5.

34 (groups)

[1]

Q6.

48 r 4

1

887

1

White Rose Maths

Divide with Remainders

Reasoning and Problem Solving

I am thinking of a 3-digit number.

When it is divided by 9, the remainder is 3

When it is divided by 2, the remainder is 1

When it is divided by 5, the remainder is 4

What is my number?

Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1

$765 \div 4 = 191$ remainder 1

How many possible examples can you find?

Maths Herald Issue 8 page 4 Looking for Patterns

Please show your working for each number investigated.

Looking for Patterns

One way of finding out whether a larger number is divisible by 11 is to add together the 2 sets of alternate digits.

If both totals are equal or have a difference that is a multiple of 11, then the number is divisible by 11.

For example,

7172	10417	536932
7 + 7 = 14	1 + 4 + 7 = 12	5 + 6 + 3 = 14
1 + 2 = 3	0 + 1 = 1	3 + 9 + 2 = 14
14 – 3 = 11	12 – 1 = 11	

Use each of the digits below only once to complete the 6 numbers so that each number is divisible by 11.

6 0 5 1 4 7 8 9 2 7 1 0 2 0

◯45◯ 6◯◯27 497◯◯2

52◯◯08 357 7◯◯ 6◯◯83 8◯◯

Maths Herald Issue 8 page 3 Looking for patterns

Please show your working for each number investigated.

Looking for Patterns

$\square^2 \div 3 = \bigcirc$ r 2

Can you find a square number that, when divided by 3, has a remainder of 2?

Can you predict what remainder you will get when you divide 16^2 by 3?