White Rose MATHS

1 Here is a hundred square.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

a) Shade all the multiples of 10

Circle all the numbers that are multiples of 5

b) Use the hundred square to complete the sentences.

If an integer has a ☐ in the ones column, then it is divisible by 10

An integer is divisible by 5 if it has either a ☐ or a ☐ in the ones column.

c) Use the statements to complete the sentences.

divisible by 5	divisible by 5 and 10	not divisible by 5 or 10

2,300 is _____

50,053 is _____

2,379,645 is _____

2 **a)** Complete the divisions.

63 ÷ 3 = ☐   960 ÷ 3 = ☐

57 ÷ 3 = ☐   3,003 ÷ 3 = ☐

b) Find the sum of the digits in each number.

63 ☐   960 ☐

57 ☐   3,003 ☐

What do you notice?

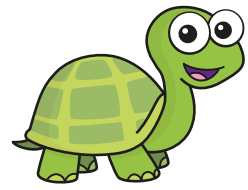**3** Write the numbers in the table.

63   108   109   945   1,809

71   182   903   459   9,000,009

	Digit sum divisible by 9	Digit sum not divisible by 9
Divisible by 9		
Not divisible by 9		

What do you notice?

4

4 is divisible by 2, so any number that is divisible by 2 must also be divisible by 4

Do you agree with Tiny? _____

Explain your reasons.

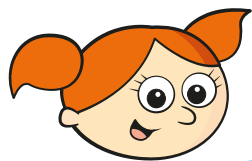**5** Tick the boxes to show which numbers are divisible by 3, 4 and 12

Number	Is the number divisible by …?		
	3	4	12
36			
84			
93			
156			
448			

Complete the sentence.

A number is divisible by 12 if it is divisible by both [ ]

and [ ]

6

I know that 16,245 is divisible by 15, because it is divisible by both 5 and 3

Explain how Alex knows 16,245 is divisible by 5 and 3

7 Use the divisibility rules for 2 and 9 to circle the numbers that are divisible by 18

| 98 | 108 | 189 | 954 |

| 200 | 18,018 | 459 | 648 |

8 There are 315 books in a warehouse.

They can be packed into boxes of 2, 3, 5, 7 or 9 books per box.

Which box sizes could be used without leaving any books remaining?

_____

9 A red light flashes every 12 seconds

A blue light flashes every 15 seconds.

The lights start flashing at the same time.

a) Will both lights flash at 1,140 seconds? _____

A yellow light flashes every 9 seconds.

b) Will the yellow light flash after 1,140 seconds? _____

c) After how many seconds will all three lights flash at the same time?

[ ] seconds

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