MATHS- MULTIPLICATION AND DIVISION YEAR 5

RECAP

- Multiplication facts up to 12x12
- Factors, factor diagram and factor pairs.
- Multiply and divide by 10 and 100.

CRUCIAL KNOWLEDGE

- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
- Establish whether a number up to 100 is prime and recall prime numbers up to 19
- Multiply by 10,100 and 1,000 and explain the effect.
- Know the rules of divisibility for 2, 5, 10.
- Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

EXTENDED KNOWLEDGE

Solve reasoning and problem solving questions using the above.

KEY VOCABULARY

Multiples

Multiples are the result of multiplying two numbers together. They can be seen as extended times tables.

Prime Numbers

A **prime number** is a number that only has 2 factors – 1 and itself.

Factors

Factors are the numbers that multiply together to make a product.

Square numbers

A square number is a number that has been multiplied by itself. The symbol to show this is ^{2}.

Cube numbers

A cube number is a number that has been multiplied by itself then multiplied by itself again. The symbol to show this is ^{3}.

$2^2 = 2 \times 2 = 4$ $3^2 = 3 \times 3 = 9$
$4^2 = 4 \times 4 = 16$ $5^2 = 5 \times 5 = 25$

$2^3 = 2 \times 2 \times 2 = 8$ $3^3 = 3 \times 3 \times 3 = 27$
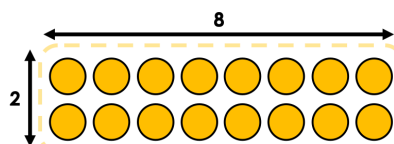$4^3 = 4 \times 4 \times 4 = 64$ $5^3 = 5 \times 5 \times 5 = 125$

Multiply and dividing by 10, 100 and 1,000

When a number is multiplied by 10, 100 or 1,000, the digits move to the left in the place value column. The digits move **1 place left** when we multiply by 10, **2 places** to multiply by 100 and **3 places** to multiply by 1,000.

TH	H	T	O	.	t
7	9	0	0		
	7	9	0		
		7	9		
			7	.	9

÷10
÷100
÷1,000

8

2

2 × 8 = 16

factor   factor   product

PRIME NUMBERS

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

FACTORS

42

6   3   2   1   42 21 14 7