

Lesson 20 **NUMBER**

Multiplication facts: the 2, 4, 5 and 10 tables and their patterns

CURRICULUM ALIGNMENT

NUM.OPS.3

understand and apply flexibly the four operations; and the relationships between operations.

ALG.PRR.3a

identify rules that describe the structure of a pattern and use these rules to make predictions.

INTERACTIVES **Hundred Square · challenge, display, explore**

WHAT THIS LESSON TEACHES

The multiples of a number are the numbers you land on when you count in equal steps of it. Multiples of 5 all end in 0 or 5, multiples of 10 all end in 0, multiples of 2 are even, and every multiple of 4 is double a multiple of 2.

→ Counting in fives: 5, 10, 15, 20. Every answer ends in 0 or 5.

→ 2 times 3 is 6 and 4 times 3 is 12. The 4s answers are double the 2s answers.

MODEL THIS ON THE BOARD

IS 40 A MULTIPLE OF 5 AND 10?

- 1 The shaded cells show the count in fives: 5, 10, 15, 20, 25, 30, 35, **40**.
- 2 Because **40** is shaded it is a multiple of **5**, and it ends in **0**.
- 3 Counting in tens (10, 20, 30, **40**) also lands on 40, so it is a multiple of **10** too.

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

DISCUSSION STARTER

REFLECT

Which times-table pattern sticks in your mind best, and how does it help you?

ANSWER KEY

Scaffold: visual check on the page**Q1:** 40 points**Q2:** 4, 8, 12**Q3:** 12 and 24

a) **Always** : Counting in fives always lands on a number whose last digit is 0 or 5.

b) **Always** : Every number you reach counting in tens has 0 as its last digit.

c) **Sometimes** : 10 and 20 are both, but 15 and 25 are not.

d) **Sometimes** : 8 is in both tables but 6 is only a multiple of 2.

EXTENSION SHEET · STRETCH ANSWERS

S1: 21**S2:** 40**S3:** 49**S4:** 18

Investigation: Hunt the table patterns — open-ended; scan pupils' working for valid solution paths rather than a single answer.