

Lesson 24 **NUMBER****Divisibility rules and tests**

WHAT THIS LESSON TEACHES

Divisibility rules test if one number divides another exactly, without dividing: by 2 if it's even, by 5 if it ends in 0 or 5, by 10 if it ends in 0, and by 3 if the **digits add to a multiple of 3**.

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

→ 126: digits $1 + 2 + 6 = 9$, a multiple of 3 → divisible by **3**.

→ 340 ends in 0 → divisible by **2, 5 and 10**.

MODEL THIS ON THE BOARD

TEST 270 FOR DIVISIBILITY BY 2, 3, 5 AND 10

- ① It ends in 0, so it is divisible by **2, 5 and 10**.
- ② Its digits add to $2 + 7 + 0 = 9$, a multiple of 3 → divisible by **3**.
- ③ So 270 is divisible by **2, 3, 5 and 10**.

ANSWER KEY

Warm-up: a) 68 b) 21 c) 6 d) 8

Q1: 1, 2, 19, 38

Q2: 116

Q3: 38 is composite — it can be divided evenly by 2 (so 1 and 38 are not its only factors).

Q4: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

EXTENSION SHEET · STRETCH ANSWERS

S1: 1, 2, 3, 6, 9, 18

S2: 48 is composite — it can be divided evenly by 2 (so 1 and 48 are not its only factors).

S3: 20 is composite — it can be divided evenly by 2 (so 1 and 20 are not its only factors).