

Lesson 23 **NUMBER****Factors, multiples, primes and composites**

WHAT THIS LESSON TEACHES

A **factor** divides a number exactly; a **multiple** is what you get from times tables. A **prime** has exactly two factors (1 and itself); a **composite** has more.

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 of 12: 1, 2, 3, 4, 6, 12. Multiples of 4: 4, 8, 12, 16...

→ 7 is prime; 9 is composite (1, 3, 9).

ANSWER KEY

Warm-up: a) 420 b) 60 c) 340 d) 196

Q1: 1, 2, 3, 6, 9, 18

Q2: 20 is composite — it can be divided evenly by 2 (so 1 and 20 are not its only factors).

Q3: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

Q4: 38 is composite — it can be divided evenly by 2 (so 1 and 38 are not its only factors).

EXTENSION SHEET · STRETCH ANSWERS

S1: 30474

S2: 23989

S3: 29330

S4: 1757

S5: 2241

Investigation: Which numbers have the most factors? — open-ended; scan pupils' working for valid solution paths rather than a single answer.