

### Five and Sevens

You need counters marked 5 and 7 and a 100 number square  
(or use Number grid ITP)

Using only the numbers 5 and 7, how many numbers on the 100  
square can you make up to 50?

Some have been done for you

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

- Can you see a pattern?
- Can you predict for numbers greater than 50?
  - Can you describe a rule for the pattern?
  - Can you write a formula ?

Choose another pair of numbers to carry out  
the same activities with

### Learning and Teaching Objectives

- Give examples to match a given condition and ones which do not
- Describe a rule of a pattern or relationship in words
- Express a relationship in a formula using letters as symbols

## Five and Sevens Solution

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

All multiples of 5  
 All multiples of 7  
 All multiples of 12 (5+7)  
 All multiples of 5 + 7  
 All multiples of 7 + 5

Once a number has been found, all numbers in the same column are possible by adding 10 (2x5)

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

If subtraction is allowed, all numbers 1 → 100 would be possible