



# Stage Five – Summer Two

## KIRF: I can recall square numbers up to $12^2$ and their square roots.

Square numbers have an odd number of factors and are the result of multiplying a whole number by itself.

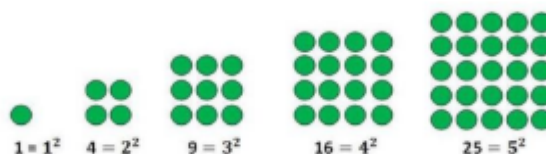
The aim is for children to recall square numbers up to  $12^2$  instantly.

### What can this look like?

#### Concrete:

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	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132

#### Concrete and Pictorial:



#### Abstract:

$1^2$	$1 \times 1$	1
$2^2$	$2 \times 2$	4
$3^2$	$3 \times 3$	9
$4^2$	$4 \times 4$	16
$5^2$	$5 \times 5$	25
$6^2$	$6 \times 6$	36
$7^2$	$7 \times 7$	49
$8^2$	$8 \times 8$	64
$9^2$	$9 \times 9$	81
$10^2$	$10 \times 10$	100
$11^2$	$11 \times 11$	121
$12^2$	$12 \times 12$	144

### Questions to ask at home

What is 8 squared?  
 What is 7 multiplied by itself?  
 What is the square root of 144?  
 Is 81 a square number?

### Key vocabulary

**Notation-** A symbol. The notation  $^2$  means squared e.g.  $5^2$  is 5 squared,  $5 \times 5 = 25$

**Square number-** The result when a number has been multiplied by itself.

**Square root-** A square root of a number is a value that, when multiplied by itself, gives the number. e.g. the square root of 9 is 3

### Things to try

**Around the clock-** think of a clock face. What are each of the numbers a square root of?  
 E.g. 12: 12 is the square root of 144.

What are each of the numbers squared?

**Dice roll-** whatever the number lands on, square it

**Cards-** turn a card over, square it and call out the answer. Can you say the answer quicker than your partner?

### Websites-

<https://www.topmarks.co.uk/maths-games/hit-the-button>

<https://mathszone.co.uk/using-applying/puzzles-and-logic-problems/splat-square100-primary-games-3/>

<https://wordwall.net/resource/9919606/maths/whack-square>