

Spring 2

Learning Focus: Know square numbers up to 144 (12^2) and their square roots.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts instantly.

Representations

Key Vocabulary

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 |
| 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 |

Abstract:

| | | |
|--------|----------------|-----|
| 1^2 | 1×1 | 1 |
| 2^2 | 2×2 | 4 |
| 3^2 | 3×3 | 9 |
| 4^2 | 4×4 | 16 |
| 5^2 | 5×5 | 25 |
| 6^2 | 6×6 | 36 |
| 7^2 | 7×7 | 49 |
| 8^2 | 8×8 | 64 |
| 9^2 | 9×9 | 81 |
| 10^2 | 10×10 | 100 |
| 11^2 | 11×11 | 121 |
| 12^2 | 12×12 | 144 |

- Notation

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

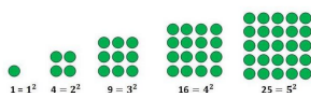
- Square number

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

Concrete and Pictorial:



Getting Started

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Suggested Activities

- **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?

Useful Websites

- [White Rose Maths](#)
- [Game: Whack-a-Square](#)
- [Maths Zone: 100 Square](#)
- [TopMarks: Hit the Button](#)

