



Key Instant Recall Facts

YEAR 5 KIRF CARD - TERM 3



This half term your children are working towards achieving their individual KIRF targets, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

To know square numbers and square roots up to 12×12 .

By the end of this half term, children should be able to recall all the square numbers and the square roots to 12×12 . The aim is for them to recall these facts instantly.

SQUARE NUMBERS

$$2^2 \quad 2 \times 2 = 4$$

$$3^2 \quad 3 \times 3 = 9$$

$$4^2 \quad 4 \times 4 = 16$$

$$5^2 \quad 5 \times 5 = 25$$

$$6^2 \quad 6 \times 6 = 36$$

$$7^2 \quad 7 \times 7 = 49$$

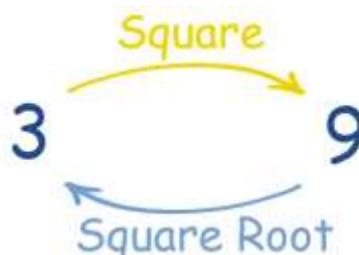
$$8^2 \quad 8 \times 8 = 64$$

$$9^2 \quad 9 \times 9 = 81$$

$$10^2 \quad 10 \times 10 = 100$$

$$11^2 \quad 11 \times 11 = 121$$

$$12^2 \quad 12 \times 12 = 144$$



Square root is the inverse of squaring a number.

| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |

SQUARE ROOTS

$$\sqrt{1} = 1$$

$$\sqrt{4} = 2$$

$$\sqrt{9} = 3$$

$$\sqrt{16} = 4$$

$$\sqrt{25} = 5$$

$$\sqrt{36} = 6$$

$$\sqrt{49} = 7$$

$$\sqrt{64} = 8$$

$$\sqrt{81} = 9$$

$$\sqrt{100} = 10$$

Play number ping pong!

Start off saying 'ping', child replies with 'pong'. Repeat and then convert to square numbers i.e. say 7^2 and they 49 or 10^2 and they say 100.

SNAP game

What about creating a game using number cards? Perhaps a game of SNAP or matching pairs.

Hit the Button

This game is an online app, free to use and great fun.
Scan the QR code



SCAN ME

KEY VOCABULARY and QUESTIONS

Square/square root/multiplied

What is 7 squared?

How do you know a number is a square number?

What is the square root of 36?

Top Tips

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 don't need to practise them all at once; perhaps you could have a fact of the day. Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising! If you would like more ideas, please speak to your child's teacher.