## How can I use this with my children?

Read the explanations of what square and cube numbers are with your child before encouraging them to complete the tables and calculate the missing numbers.

How does this help my children's learning?

Working through these activities can help your child practise and revise their skills of finding square and cube numbers in line with national curriculum objectives for year 5 onwards.

## Using Square and Cube Numbers

Recognise and use square numbers and cube numbers, and the notation for squared $\left(^{(2)}\right.$ and cubed ( ${ }^{3}$ ).

## Square Numbers

The product of a number multiplied by itself. Can be illustrated as a square, e.g $2^{2}=2$ squared $=2 \times 2=4$

A. Complete the table.

| $1^{2}$ | $1 \times 1$ | 1 |
| :---: | :---: | :---: |
| $2^{2}$ |  | 4 |
| $3^{2}$ | $3 \times 3$ |  |
|  | $4 \times 4$ | 16 |
| $5^{2}$ | $7 \times 7$ | 36 |
|  |  |  |
| $8^{2}$ |  | 100 |
| $10^{2}$ |  |  |

## Cube Numbers

The product of multiplying a digit by itself three times. Can be illustrated as a cube, e.g. $2^{3}=2$ cubed $=2 \times 2 \times 2=8$
B. Complete the table.


| $1^{3}$ | $1 \times 1 \times 1$ | 1 |
| :---: | :---: | :---: |
| $2^{3}$ | $2 \times 2 \times 2$ |  |
| $3^{3}$ | $4 \times 4 \times 4$ | 27 |
|  | $5 \times 5 \times 5$ | 64 |
| $5^{3}$ | $6 \times 6 \times 6$ | 343 |
| $6^{3}$ |  | 512 |
| $8^{3}$ |  | 729 |
| $10^{3}$ |  |  |

C. Calculate the missing numbers.
a) $7^{2}+4^{3}=$
b) $8^{2}+10^{2}=$
c) $5^{3}-5^{2}=$
d) $5^{2}+$
$=89$
e) $-8^{2}=17$
f) $3^{2} \times 2^{3}=$
g) $3^{2}+\square=5^{2}$
h) $6^{3} \div 2^{2}=$
i) $13^{2}=$
j) $10^{3}-2^{2}=$
k) $100^{2}=$
l) $\underline{L}^{2}=144$

## Using Square and Cube Numbers Answers

A. Complete the table.

| $1^{2}$ | $1 \times 1$ | 1 |
| :---: | :---: | :---: |
| $2^{2}$ | $\mathbf{2} \times \mathbf{2}$ | 4 |
| $3^{2}$ | $3 \times 3$ | $\mathbf{9}$ |
| $\mathbf{4}^{\mathbf{2}}$ | $4 \times 4$ | 16 |
| $5^{2}$ | $5 \times 5$ | 25 |
| $\mathbf{6}^{\mathbf{2}}$ | $\mathbf{6} \times \mathbf{6}$ | 36 |
| $\mathbf{7}^{\mathbf{2}}$ | $7 \times 7$ | $\mathbf{4 9}$ |
| $8^{2}$ | $\mathbf{8} \times \mathbf{8}$ | $\mathbf{6 4}$ |
| $\mathbf{9}^{\mathbf{2}}$ | $\mathbf{9} \times \mathbf{9}$ | $\mathbf{8 1}$ |
| $10^{2}$ | $\mathbf{1 0} \times \mathbf{1 0}$ | 100 |

B. Complete the table.

| $1^{3}$ | $1 \times 1 \times 1$ | 1 |
| :---: | :---: | :---: |
| $2^{3}$ | $2 \times 2 \times 2$ | 8 |
| $3^{3}$ | $\mathbf{3} \times \mathbf{3 \times 3}$ | 27 |
| $\mathbf{4}^{\mathbf{3}}$ | $4 \times 4 \times 4$ | 64 |
| $5^{3}$ | $5 \times 5 \times 5$ | 125 |
| $6^{3}$ | $6 \times 6 \times 6$ | $\mathbf{2 1 6}$ |
| $\mathbf{7}^{\mathbf{3}}$ | $\mathbf{7} \times \mathbf{7} \times \mathbf{7}$ | 343 |
| $8^{3}$ | $\mathbf{8} \times \mathbf{8} \times \mathbf{8}$ | 512 |
| $\mathbf{9}^{\mathbf{3}}$ | $9 \times 9 \times 9$ | 729 |
| $10^{3}$ | $\mathbf{1 0} \times \mathbf{1 0} \times \mathbf{1 0}$ | $\mathbf{1 0 0 0}$ |

C. Calculate the missing numbers.

| a) $7^{2}+4^{3}=\mathbf{1 1 3}$ | b) $8^{2}+10^{2}=\mathbf{1 6 4}$ | c) $5^{3}-5^{2}=\mathbf{1 0 0}$ |
| :--- | :--- | :--- |
| d) $5^{2}+\mathbf{8}^{\mathbf{2}}=89$ | e) $\mathbf{9}^{\mathbf{2}}-8^{2}=17$ | f) $3^{2} \times 2^{3}=\mathbf{7 2}$ |
| g) $3^{2}+\mathbf{4}^{\mathbf{2}}=5^{2}$ | h) $6^{3} \div 2^{2}=\mathbf{5 4}$ | i) $13^{2}=\mathbf{1 6 9}$ |
| j) $10^{3}-2^{2}=\mathbf{9 9 6}$ | k) $100^{2}=\mathbf{1 0 0 0 0}$ | l) $\mathbf{1 2}^{2}=144$ |

If you enjoyed this resource, why not try...


> What is a Square and a Cube Number Maths Mastery PowerPoint


