

## Powers and roots

Terms	Definitions	Illustrations
<b>Cube (a number)</b>	<p>When a number is multiplied by itself once, and then again, the number is cubed.</p> <p>To indicate this process, a power of 3 is used.</p>	<p><math>4^3 = 4 \times 4 \times 4 = 64</math></p> <p>For this example we would say “4 cubed is 64”.</p>
<b>Cube root</b>	<p>Finding the cube root is the inverse process of cubing a number.</p>	<p>The cube root of 8 is 2 because 2 cubed is 8.</p> <p>This is written <math>\sqrt[3]{8} = 2</math>.</p>
<b>Power</b>	<p>The number of times to repeat a multiplication.</p>	<p><math>3^4 = 3 \times 3 \times 3 \times 3 = 81</math></p> <p>For this example we would say “3 to the power 4 is 81”.</p>
<b>Square (a number)</b>	<p>When a number is multiplied by itself, the number is squared.</p> <p>To indicate this process, a power of 2 is used.</p>	<p><math>5^2 = 5 \times 5 = 25</math></p> <p>For this example we would say “5 squared is 25”.</p>
<b>Square root</b>	<p>Finding the square root is the inverse process of squaring a number.</p>	<p>The square root of 9 is 3 because 3 squared is 9.</p> <p>This is written <math>\sqrt{9} = 3</math>.</p>

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<b>Root</b>	The inverse operation of a power.	
<b>Scientific notation</b>	A standardised way of writing numbers using positive and negative powers of 10.  Scientific notation is also known as standard form.	732000 can be written as $7.32 \times 10^5$ .  0.00045 can be written as $4.5 \times 10^{-4}$ .