SQUARE ROOTS

A DEFINITION

Definition Square root

The **square root** of a, written $\sqrt{a}$, is the **positive number** which, when squared, gives a:

$$\left(\sqrt{a}\right)^2 = \sqrt{a} \times \sqrt{a} = a$$

Ex: Find $\sqrt{25}$.

Answer: Since $5 \times 5 = 25$, $\sqrt{25} = 5$.

Definition Perfect Squares

A **perfect square** is a number that is the result of squaring an integer.

Ex: The perfect squares of the first few integers are:
1, 4, 9, 16, 25, 36, 49, 64, and so on.

B CALCULATING SQUARE ROOTS

It is easy to calculate the square root of a perfect square, but determining the square root of other numbers can be quite challenging.

Method Use a calculator

- Press the square root button $\boxed{\sqrt{\ }}$
- Enter the number
- Press the equals button $\boxed{=}$

Ex: Use a calculator to find $\sqrt{10}$ (round to 1 decimal place).

Answer: By entering $\sqrt{10}$ and pressing the equals button, the calculator displays: 3.16227766017.
So $\sqrt{10} \approx 3.2$.