$$\diamondsymbol$$

Real Square Roots

1   Why

We want to solve equations with squares.

Let b be any real number. We want to find a to solve

$$a^2 = b.$$

We call a

Proposition 1. *A real number has two square roots.*

Despite the following proposition, we still speak of the *square root function* which associates a real number to its positive square root.

2   Why

As with natural numbers, we denote the square root of x by $\sqrt{x}$.