

Exact value / approximate check

A radical can be exact without a decimal

Square-number bounds give a fast reasonableness check.

Use $=$ for equal values and $\approx$ for rounded values.

1. SQUARES AROUND n

Your exact step / reason: _____

2. EXACT RADICAL

Your exact step / reason: _____

3. DECIMAL CHECK

Your exact step / reason: _____

WORKED EXAMPLE

$9 < 10 < 16$, so $3 < \sqrt{10} < 4$.

$\sqrt{10}$ is exact; $\sqrt{10} \approx 3.162$ is rounded.

TRY IT: What is wrong with $\sqrt{10} = 3.162$?

Tactile / low-vision route:

Put 9, 10, 16 cards in order; connect to root bounds 3 and 4.