

Find the square factor

Simplify a root and check by squaring

Split a positive product under a square root.

Do not split a sum using the same rule.

1. $n = \text{SQUARE} \times \text{REST}$

Your exact step / reason: _____

2. $\sqrt{n} = \sqrt{\text{SQUARE}} \times \sqrt{\text{REST}}$

Your exact step / reason: _____

3. SQUARE THE RESULT

Your exact step / reason: _____

WORKED EXAMPLE

$72 = 36 \times 2$, so $\sqrt{72} = 6\sqrt{2}$.

$(6\sqrt{2})^2 = 36 \times 2 = 72$.

TRY IT: Why is $\sqrt{(36 + 2)}$ not $6 + \sqrt{2}$?

Tactile / low-vision route:

Use 36 and 2 factor cards; fold the 36 card to show 6^2 .