Powers and Roots

Name__________

(1) Complete the following WITHOUT A CALCULATOR

\[ \sqrt{25} = 5 \]

\[ \sqrt{36} = 6 \]

\[ \sqrt{49} = 7 \]

\[ \sqrt{81} = 9 \]

(2) Find the following WITHOUT A CALCULATOR

\[ 9^2 = 81 \]

\[ \sqrt{144} = 12 \]

\[ 2 \times 2 \times 2 \times 2 = 16 \]

\[ 3^3 = 27 \]

\[ 5^2 = 25 \]

\[ \sqrt[3]{125} = 5 \]

\[ 6^2 + 2^2 = 36 + 4 = 40 \]

\[ 3^3 + 12 = 27 + 12 = 39 \]

\[ 10^3 = 1000 \]

Write \(2 \times 2 \times 2\) using index notation.

Write \(3 \times 3 \times 3 \times 3\) using index notation.

Write \(5 \times 5 \times 5 \) using index notation.

Write in \(6 \times 6 \times 6 \times 6 \times 6 \times 6 \) using index notation.

Write in \(p \times p \times p \times p \times p \) using index notation.

(3) Investigate the rules of indices for multiplication and division.

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