ALGEBRA 2 · CLASSWORK

Find All Real nth Roots

SCORE / 25

01 Part A · Practice

For an even index, a positive number has two real *n*th roots (±) and a negative number has none; for an odd index there is exactly one real root.

EXAMPLE

Find all real fourth roots of 81 **and all real cube roots of** −125**.**

1. $3^4 = (-3)^4 = 81$: roots 3 and −3.
2. $(-5)^3 = -125$: the only real cube root is −5.

1 ●○○ How many real square roots does 25 have? Name them.

2 ●○○ Find all real cube roots of −27.

3 ●○○ Is −8 a square root of 64? Explain.

4 ●○○ Evaluate $\sqrt[5]{32}$.

5 ●○○ Find all real square roots of 49.

6 ●○○ Evaluate $-\sqrt[3]{216}$.

7 ●○○ How many real fifth roots does 32 have? Name them.

8 ●○○ Is 4 a fourth root of 81? Explain.

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Preview - the full worksheet and its answer key are at primeworksheet.com