ALGEBRA 1 · CLASSWORK

Key Features of the Cube Root Function

SCORE / 25

01 Part A · Practice

For $f(x) = a\sqrt[3]{x}$ the domain and range are all real numbers and the graph passes through $(0, 0)$.

EXAMPLE

Find $f(-8)$ and the domain of $f(x) = 2\sqrt[3]{x}$.

1. $\sqrt[3]{-8} = -2$ because $(-2)^3 = -8$.
2. $f(-8) = 2(-2) = -4$.
3. Every number has a cube root: domain all reals.

1 ●○○ Complete the table for $f(x) = 7\sqrt[3]{x}$.

x	−1	0	1	8	27
$f(x)$					

2 ●○○ Find the domain and range of $f(x) = 6\sqrt[3]{x}$. Increasing or decreasing?

3 ●○○ For $f(x) = 5\sqrt[3]{x}$, find x when $f(x) = 5$.

4 ●○○ Evaluate $f(x) = 8\sqrt[3]{x}$ for $x = 27$.

5 ●○○ Find the domain, range, and x-intercept of $f(x) = -3\sqrt[3]{x}$. Increasing or decreasing?

6 ●○○ For $f(x) = -2\sqrt[3]{x}$, find x when $f(x) = 6$.

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