

Name: _____ Class: _____ Date: _____

Algebra 2 CP Chapter 7 Practice

COMPLETE EACH PROBLEM WITH WORK.

1. Evaluate each expression.

a) $\left(\sqrt[3]{-64}\right)^2$

b) $32^{-2/5}$

c) $81^{3/4}$

2. Simplify each expression.

a) $4^{7/4} \cdot 4^{5/4}$

b) $\frac{9^{1/5}}{9^{5/5}}$

c) $\sqrt[3]{81ab^{11}c^6}$

3. Let $f(x) = x^2$, $g(x) = -2x + 3$, and $h(x) = \frac{2}{3}x$. Perform each indicated operation.

a) $\frac{g(x)}{f(x)}$

b) $f(x) - g(x)$

c) $g(x) + h(x)$

d) $h(g(x))$

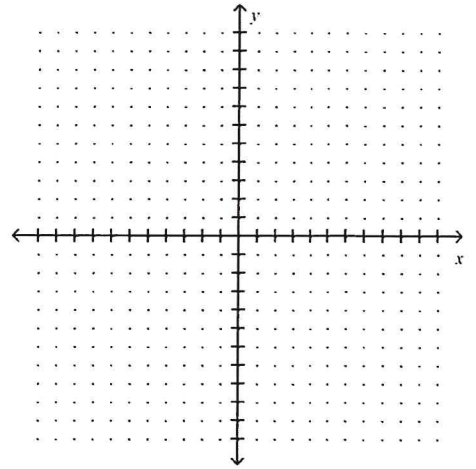
4. **Verify** that f and g are inverse functions if $f(x) = 5x^3$ and $g(x) = \sqrt[3]{\frac{x}{5}}$.

5. Find the inverse of each function.

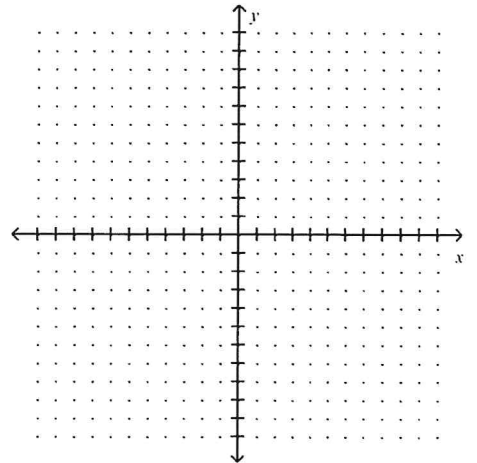
a) $f(x) = x^2 - 16$

b) $f(x) = -\frac{1}{3}x + 5$

6. Graph the function $y = -2\sqrt[3]{x+1} - 3$.



7. Graph the function $y = 3\sqrt{x} - 5$.



8. Solve and check for extraneous solutions.

a) $(x - 5)^{5/3} - 73 = 170$

b) $x - 6 = \sqrt{3x}$

c) $\sqrt[4]{x + 16} = 3$

d) $\sqrt{4x + 1} = \sqrt{x + 10}$