

Algebra 2
Chapter 6 Review

Name _____

If $f(x) = 3x + 2$ and $g(x) = x^2 + 5$, find the following:

1. $f(x) + g(x)$	2. $f(x) - g(x)$
3. $f(x) \cdot g(x)$	4. $\frac{g(x)}{f(x)}$ What is the restriction on x?
5. $f(g(x))$	6. $g(f(x))$
7. $g(f(5))$	8. $f(f(-2))$

Simplify.

9. $\sqrt{36a^4b^8}$	10. $\sqrt[3]{343x^5y^7}$
11. $\sqrt{36} + 2\sqrt{32} - \sqrt{50}$	12. $\frac{5}{\sqrt{6}}$
13. $\frac{7}{2 + \sqrt{3}}$	14. $a^{1/4} \cdot a^{2/3}$

Solve.

15. $\sqrt{5x+14} - 2 = 6$	16. $\sqrt{4x-15} = \sqrt{2x+9}$
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