Name_____ Date _____

Chapter 5 Test Review **Algebra 2**

Simplify the expression.

1. $(-32)^{3/5}$

2. $2\sqrt{72} - 3\sqrt{2}$

3. $\dfrac{\sqrt[5]{1215}}{\sqrt[5]{5}}$

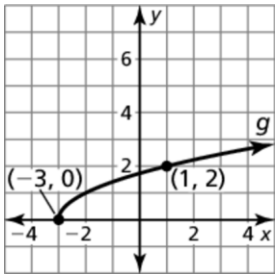
4. $\sqrt[3]{-8x^3y^5z^7}$

5. $27^{2/3}$

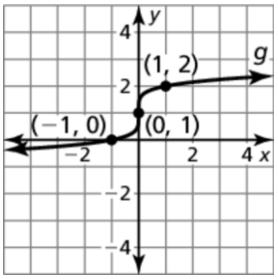
6. $\dfrac{2}{1-\sqrt{2}}$

The transformation of *f* is represented by *g*. Write a rule for *g*.

7. $f(x) = \sqrt{x}$



8. $f(x) = \sqrt[5]{x}$



9. Let $f(x) = -2x^{2/5}$ and $g(x) = -x^{2/5}$. Find $(f + g)(x)$ and $(f - g)(x)$ and state the domain of each. Then evaluate $(f + g)(243)$ and $(f - g)(243)$.

10. Let $f(x) = \frac{2}{3}x^{3/2}$ and $g(x) = -4x$. Find $(f \bullet g)(x)$ and $\left(\frac{f}{g}\right)(x)$ and state the domain of each. Then evaluate $(f \bullet g)(4)$ and $\left(\frac{f}{g}\right)(4)$.