

Math 0099  
University of North Georgia  
Spring 2015  
Quiz #7

Name: Key Date: March 27, 2015

1. Graph and state the domain of the following square root function:

$$g(x) = -\sqrt{-x+2} + 5$$

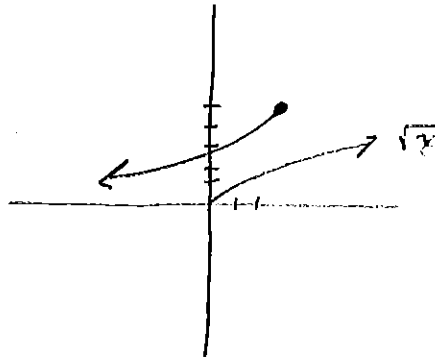
$$-x + 2 \geq 0$$

$$-x \geq -2$$

$$x \leq 2$$

$$\text{Domain: } (-\infty, 2]$$

$$h = 2, k = 5$$



2. Simplify

$$\sqrt{\frac{a^4 b}{121}}$$

$$= \frac{\sqrt{a^4 b}}{\sqrt{121}} = \frac{a^2 \sqrt{b}}{11}$$

$$3. \frac{\sqrt[5]{96a^{12}b}}{\sqrt[5]{3a^2b^{-4}}} = \sqrt[5]{\frac{96a^{12}b}{3a^2b^{-4}}} = \sqrt[5]{32a^{10}b^5}$$

$$= \boxed{2a^2b}$$

4. Use the properties of exponents/radicals to simplify. Write with positive exponents.

$$\left(49^{\frac{1}{4}}y^{\frac{3}{4}}\right)^2 = 49^{\frac{2}{4}} \cdot y^{\frac{6}{4}}$$

$$= 49^{\frac{1}{2}} \cdot y^{\frac{3}{2}}$$

$$= \sqrt{49} \cdot \sqrt{y^3}$$

$$= 7 \cdot y \sqrt{y}$$

$$= \boxed{7y\sqrt{y}}$$

$$5. \frac{\sqrt[6]{s}}{\sqrt[5]{s}} = \frac{s^{\frac{1}{6}}}{s^{\frac{1}{5}}} = s^{\frac{1}{6} - \frac{1}{5}} = \frac{5-6}{30} = -\frac{1}{30}$$

$$= \frac{1}{s^{\frac{1}{30}}}$$

$$= \boxed{\frac{1}{\sqrt[30]{s}}}$$