

**Math 99 Worksheet #4**  
May 4, 2007

1. Evaluate the following.

(a)  $-\sqrt[3]{64}$

(b)  $\sqrt[3]{13^3}$

(c)  $81^{1/2}$

(d)  $8^{4/3}$

2. Simplify the following.

(a)  $x^{1/3} \cdot x^{1/4}$

(b)  $\sqrt{5} \cdot \sqrt{z}$

(c)  $\sqrt{\frac{a^2}{9}}$

(d)  $\sqrt{75}$

3. Graph the function  $f(x) = \sqrt{x-2}$  and give its domain and range.

4. Simplify the following.

(a)  $(-32)^{3/5}$

(b)  $\left(\frac{125}{27}\right)^{-1/3}$

(c)  $k^{1/3}(3k^{5/3} + k^{-1/3})$

(d)  $\frac{a^{3/4}}{a^{5/4} \cdot a^{-2}}$

(e)  $\sqrt{98x^3}$

(f)  $\sqrt[6]{\sqrt[4]{x^2}}$

(g)  $\sqrt[3]{250a^2b^7}$

(h)  $\sqrt{\frac{x^{22}}{32}}$

(i)  $-\sqrt[3]{-125x^6y^9z^4}$