

Name: _____ is Amazing! 😊
Date: _____

Math 115 Spring 2026
Mr. Sahney

Standard 13 Practice

1. Evaluate each expression. If the result is not a real number, enter DNE.

a. $\sqrt{49}$

b. $-\sqrt{49}$

c. $\sqrt{-25}$

d. $\sqrt[3]{64}$

e. $\sqrt[3]{-8}$

f. $\sqrt{\frac{1}{4}}$

g. $\sqrt[3]{-\frac{8}{27}}$

2. Rewrite each expression using a rational exponent:

a. $\sqrt[4]{x^7}$

b. $\sqrt[12]{y}$

c. $\sqrt[3]{a^{11}}$

3. Simplify the following expressions. Assume that all variables represent positive numbers.

a. $\sqrt[5]{x^{40}}$

b. $\sqrt[4]{y^{12}}$

c. $\sqrt{25a^6}$

d. $\sqrt{81a^4}$

e. $\sqrt[3]{27x^{18}y^9}$

4. Simplify and write your answer using only positive exponents

$$\frac{(25x^6)^{-1/2}(8y^5)^{1/3}}{4x^{-1}y^{2/3}}$$

5. Answer all parts

a) Find the domain of the function $f(x) = \sqrt{x-8}$ Write your answer in interval notation.

b) Evaluate $f(12)$

c) Evaluate $f(6)$

6. Find the domain of the function $g(x) = \frac{1}{\sqrt{x-8}}$ Write your answer in interval notation.