

PC Number Assignment 1 (5%)

Use a calculator for question 1. Do not use a calculator for any other part of this assignment

Solve to find the value of x

$x^4 = 100,$	$x^3 = 100,$
$x^5 = 35,$	$5x^7 - 25 = 100,$
$(x^3 - 27)(x^2 - 16) = 0$	$\frac{x^5 - 3}{4} = 7$

Click and read the page 'classification of number' on <https://tentotwelvemath.com/grade-11/grade-11-prec calculus/6-number/>

Write down the following – (choose different numbers from the people you work with)

3 negative integers	
3 numbers that are rational and are not integers	
3 numbers that are real and are not rational	
The letter like symbol for the set of real numbers	
The letter like symbol for the set of rational numbers	
The letter like symbol for integers	

Write down the value of x

$2^x = 32,$ $x =$	$2^x = 1,$ $x =$	$2^x = 128,$ $x =$	$2^x = 8,$ $x =$	$2^x = 1024,$ $x =$
$4^x = 64,$ $x =$	$5^x = 125,$ $x =$	$25^x = 625,$ $x =$	$7^x = 343,$ $x =$	$3^x = 81,$ $x =$

Evaluate each of the following:

$16^{\frac{1}{4}} =$	$125^{\frac{1}{3}} =$	$1024^{0.1} =$	$9^{\frac{1}{2}} =$
$16^{\frac{5}{4}} =$	$125^{\frac{2}{3}} =$	$1024^{0.7} =$	$9^{\frac{5}{2}} =$

Simplify each expression. Show all your steps.

$$(2x^3y^4)^3$$

$$\frac{16x^7}{32x^2}$$

$$3(x + 4)^2$$

$$4a^2(a^3b^4 + ab)$$

$$\frac{1}{x^{-4}}$$

$$\left(\frac{125}{27}\right)^{-\frac{2}{3}}$$

$$\left(\frac{3x^3y^{-2}z^4}{9x^2y^{-5}z^7}\right)^2$$

$$\left(\frac{3x^3y^{-2}z^4}{9x^2y^{-5}z^7}\right)^{-2}$$