

Quiz Questions 1 for Mathematics 223
Introductory Analysis I - Fall 2000
Material Covered: Sections 1.5,1.6 of workbook and text
For: Friday, 8th September

This is a 15 minute quiz, worth 5% and marked out of 5 points. The total possible points awarded for each question is given in square brackets at the beginning of each question. Anything that can fit on one side of an $8\frac{1}{2}$ by 11 inch piece of paper may be used as a reference during this quiz. A calculator may also be used. No other aids are permitted.

Name (please print): _____ . ID Number: _____
last first

1. [1 point]

Convert $\frac{3}{\sqrt[5]{m}}$ to rational exponents. _____

Convert $y^{4/7}$ to radical notation. _____

2. [3 points] Consider the following table showing the number of new small-business incorporations for various years.

<i>Number of years since 1980, x</i>	0	2	4	6	8	10	11
<i>Number of New Incorporations, C</i>	520	560	640	700	695	645	615

(a) Draw a scatter plot of the data.

(b) Using the data points (2,560), (8,695), (11,615), find a quadratic function that fits the data. _____

(c) Use the quadratic function to estimate the number of new small-business incorporations 9 years after 1980. _____

(Hints: STAT EDIT, GRAPH, 2nd MATRIX EDIT and 2nd MATRIX MATH).

3. [1 point] Find the zeros (roots) of the function

$$f(x) = |\sqrt[3]{2 - x^2}| - 3$$

(Hint: Graph, then 2nd CALC.)

1. [1 point]

$$3m^{-1/5}$$

$$\sqrt[7]{y^4}$$

2. [3]

(a) Looks like reading ability versus level of illumination scatter plot

(b) Use rref(to find $f(x) = -5.5x^2 + 77.1x + 427.6$.

(c) 676; since $f(9) = -5.5(9)^2 + 77.1(9) + 427.6$

3. [1]

(-5.39, 0) and (5.39, 0)

Use calculator with WINDOW -10 10 1 -5 5 1 1; looks like a “W”; find zeros using 2nd CALC.