

Math 103 Professor Katiraie Quiz One Form B

Name \_\_\_\_\_

Chapter One

Note: Show all work. Unless a problem is marked with an asterisk (\*), use a calculator only to check.

1. Simplify:  $\left(\frac{x^3 y^{-5} z^{-2}}{x^5 y z^{-4}}\right)^{-1}$  (Assume no variables are equal to zero.) (4 points)

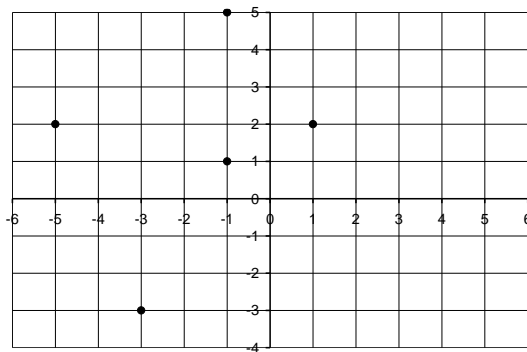
\*2. If  $S = \frac{4}{3}\pi r^3$  find S when  $r = 3$ . (2 points)

3. Find the domain and range of each relation. (2 points)

a.  $\{(1,2)(3,4)(0,6)(7,8)(0,10)\}$  Domain:

Range:

b.



Domain:

Range:

c.

x	1	2	3	4	5
y	9	3	3	3	3

Domain:

Range:

\*4. Evaluate with your calculator and answer to the appropriate number of significant digits. (2 points)

a.  $\frac{5 \pm \sqrt{120}}{6(14)}$

b.  $5432.01\left(1 + \frac{.032}{12}\right)^{12(3)}$  Assume this is a calculation involving money.

5. Solve the following algebraically  $13 - 2x = \frac{1}{3}x + 7$  (2 points)

Solve: (2 points Each)

6.  $3x - (2x - 5) = 4(2x + 7)$

7.  $t^2 - 6t + 5 = 0$

8. For the line  $7x - 3y = 9$ , find the (4 points)

a. slope

b. y-intercept

c. x-intercept