

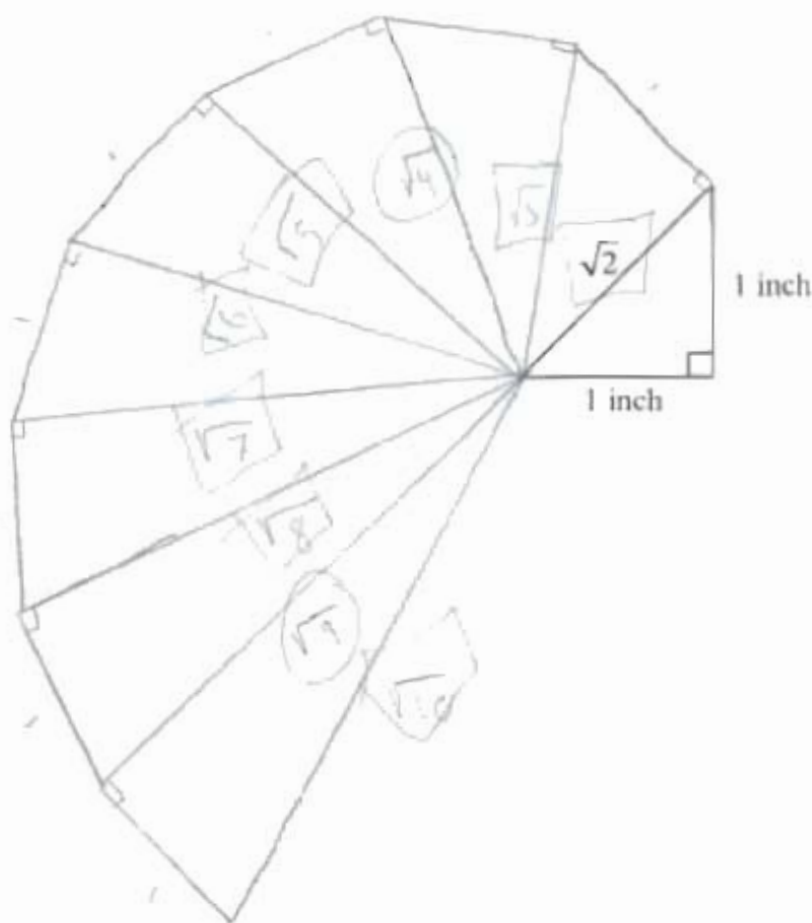
Group Project: Spiral of Roots
Math 32
Spring 2007
Mr. McKeague

$\frac{4}{5}$

Name Parker Poor
Name Lauren Bunabetz
Name Lindsay Beeson
Name Phillip Rovers
Name _____

1. Construct the spiral of roots. Label each side of each triangle, as you go. Continue until you have a diagonal of length $\sqrt{10}$.
2. Circle each irrational number on your spiral.
3. Circle each rational number on your spiral.
4. Write a definition for irrational numbers.

can't be written as a fraction
or a decimal



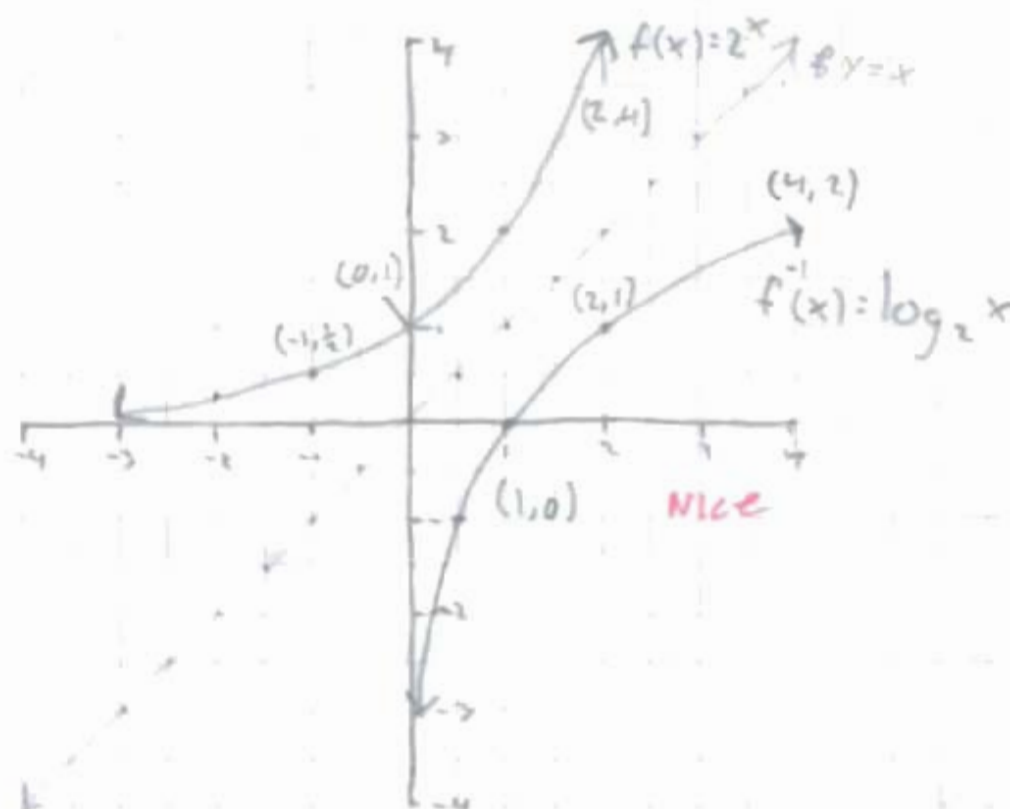
Math Bacon

1) $f(x) = 2^x$

$f^{-1}(x) = \log_2 x$

x	f(x)
-2	1/4
-1	1/2
0	1
1	2
2	4

x	f^{-1}(x)
1/4	-2
1/2	-1
1	0
2	1
4	2



4) $(1.02)^{4T} = 3$

$4T(\log(1.02)) = \log 3$

$4T = \frac{\log 3}{\log(1.02)}$

$4T = 55.48$

$T \approx 13.87$ ✓

#2 SOLVE FOR Z $\log 1000 = Z$

$$\log_{10} 1000 = Z$$

$$10^Z = 1000$$

$$10^Z = 10^3$$

$$\boxed{Z = 3} \checkmark$$

⑤ $\frac{3}{x^2-1}$ label all important items

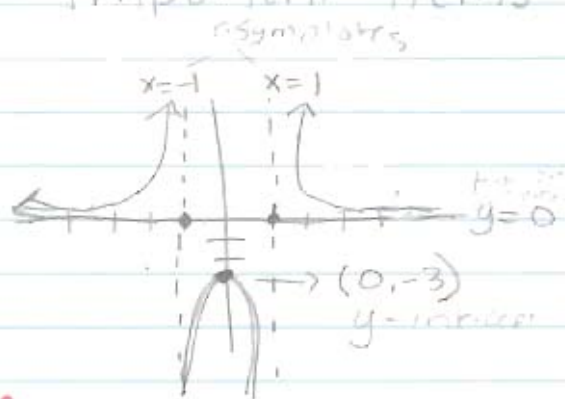
asymptotes (vertical)
 $x = \pm 1$

horizontal
 $y = 0$

intercepts (y)

$$x = 0$$

$$y = -3$$



$$\#2 \quad 10^2 = 1000$$

$$10^2 = 10^3$$

$$2 = 3 \quad \checkmark$$

$$\#3 \quad \log_x \left(\frac{1}{9}\right) = \left(-\frac{2}{3}\right)$$

$$x^{(2/3)} = \left(\frac{1}{9}\right)$$

$$\left(x^{2/3}\right)^{-3/2} = \left(\frac{1}{9}\right)^{-3/2}$$

$$x = 27 \quad \checkmark$$

$$\#6 \quad f(x) = -x^4 + 24x^3 - 144x^2$$

$$12 \left| \begin{array}{cccc} -1 & 24 & -144 & 0 & 0 \\ & -12 & 144 & & \\ \hline -1 & 12x^2 & \boxed{0} & & \end{array} \right.$$

$$(x-12) \cdot -x(x^2-12x)$$

$$(x-12) \cdot -x^2(x-12)$$

$$y = -x^2(x-12)^2$$

