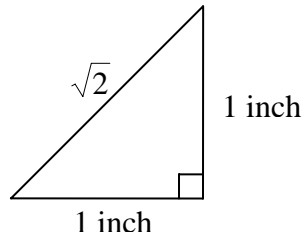


Group Project 2: Spiral of Roots  
Math 32  
Spring 2007  
Mr. McKeague

Name \_\_\_\_\_  
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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.



Work the problems on the next page. Each member of the group must work at least one of the problems.

## Group Work

1. Graph  $f(x) = 2^x$  and  $f^{-1}(x) = \log_2 x$  on the same coordinate system. Label 3 points on each graph.
2. Solve for  $z$ :  $\log 1,000 = z$
3. Solve for  $x$ :  $\log_x \left(\frac{1}{9}\right) = -\frac{2}{3}$
4. Solve for  $t$ :  $(1.02)^{4t} = 3$
5. Graph  $f(x) = \frac{3}{x^2 - 1}$ . Label all important items.
6. Graph  $f(x) = -x^4 + 24x^3 - 144x^2$ . Label all important items.