

# Math 160

# Quiz 8

Name: \_\_\_\_\_

July 30, 2002

This quiz is worth 10 points. Show all work for credit.

Compound Interest:  $A = P\left(1 + \frac{r}{k}\right)^{kt}$

1. How much less area does a circle have than a square that inscribes it?
2. You invest \$40,000 into a fund with an APR of 4% compounded monthly. How long must you invest the money to get \$50,000?
3. Give the simplest rational function that has a vertical asymptote at  $x = -2$ , roots at  $x = 1$  and  $x = 3$ , a hole at  $x = -4$ , and with an end-behavior model of  $2x^2$ .
4. (Bonus) You want to invest \$30,000 into an account with an APR of 4% for 6 years to get \$38,127.32. How often was the money compounded?