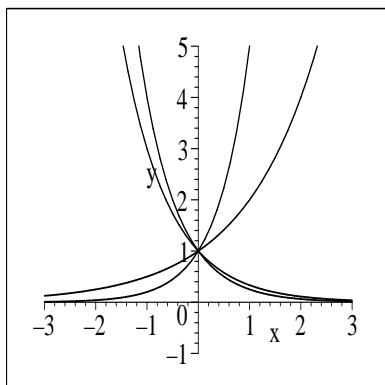


## Quiz 3

MATH 139-02  
Thursday, January 29, 2004

1. A town has a population of 1000 people at time  $t = 0$ . Write a formula for the population  $P$  as a function of the year  $t$  if the population increases by 2% per year.
2. Below are graphs of four exponential functions  $f(x) = a^x$ ,  $g(x) = b^x$ ,  $h(x) = c^x$ , and  $k(x) = d^x$ , with  $a < b < c < d$ . (That is,  $a$  is smallest and  $d$  is greatest.) Label the graphs with the appropriate function name.



3. Determine whether the table of values below could correspond to an exponential function. If it can, find a formula for the function.

|        |     |      |       |       |       |
|--------|-----|------|-------|-------|-------|
| $x$    | 0   | 1    | 2     | 3     | 4     |
| $f(x)$ | 1.5 | 1.95 | 2.535 | 3.296 | 4.284 |