

MATH 131 CALCULUS QUIZ 1.

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1. Determine whether or not the function is a power function. If it is, write it in the form $y = kx^p$ and give the values of the coefficient k and exponent p .

a) $y = 3x(x^5)^2$

b) $y = 2^x$

c) $y = \frac{8}{x}$

2. A population is currently 200 and is growing at 5 percent per year.

a) Write a formula for the population P , as a function of time, t .

b) Sketch a graph of P against t .

c) Estimate the population 10 years from now.

3. If you need 20,000 dollars in your account 5 years from now and the annual interest rate on your account is 8 percent compounded continuously, how much should you deposit now?