Fundamentals of Computer Programming 2
Practice Problems – January 20, 2003

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Some useful functions

Function name	argument type/s	return type	library
floor(x)	double	int	cmath
ceil(x)	double	int	cmath
sqrt(x)	double	double	cmath
strlen(s)	char array	int	cstring
strcmp(s1,s2)	2 char arraya	bool	cstring
rand()	none	int	cstdlib

Problems

1. Write a function that takes as input an array of real numbers and returns their mean (average).
2. Use the above function to write a program that calculates the mean of the n'th powers of an array of integers input by the user (n is also specified by the user).
3. Use the function in (1) to calculate the mean and standard deviation of an array of real numbers input by the user.
4. Write a program that takes as input 3 strings and sorts them in alphabetical order. (assume all the strings consist only of lower case alphabets).

Note

Most versions of C++ already have a built in function pow(x,y) which returns the value x^y (x,y, can be of the type "double"). Just for kix, don't use this function for (2). Write you own function for calculating k^n where k, n are integers.