**CS 542 Homework: sets**

For this homework, you will write several functions that do operations on sets.

void show(const set<int> & s);

Output the #'s in s with whatever formatting pleases you.

unsigned evens(const set<int> & s);

Return the number of even numbers in s.

unsigned howManyInteresting(const set<int> & s, bool (\*interesting)(int n));

Return the number of interesting numbers in s, according to the function whose pointer we pass as the second arg.

bool subset(const set<int> & little, const set<int> & big);

Return whether all the elements in little also appear in big.

set<int> Union(const set<int> & s0, const set<int> & s1);

(The name of this function is spelled with a capital U.)

create and return the set that is the union of s0 and s1.

set<int> intersection(const set<int> & s0, const set<int> & s1);

create and return the set that is the intersection of s0 and s1.

set<int> complement(const set<int> & s, const set<int> & universe);

Assume without checking that all the elements of s also appear in universe.

Build and return the set containing all the elements of universe that don't appear in s.

set<int> difference(const set<int> & a, const set<int> & b);

Build and return the difference of sets a and b, which is defined as all the elements of a that don't appear in b. (In case you're wondering whether you're allowed to have one of your functions call another one, yes, that's always fine.)

set<int> symmetricDifference(const set<int> & a, const set<int> & b);

The symmetric difference of sets a and b is defined as the set containing all the elements of a that don't appear in b, together with all the elements of b that don't appear in a.

main: write a main that calls these other functions. You decide the details of your main.