Profiling Output:
Name:- Prathamesh Samadhan Patil.
PRN:- 23620003

Flat profile:

Each sample counts as 0.01 seconds.
no time accumulated

% time	cumulative seconds	self seconds	calls	self Ts/call	total Ts/call	name
0.00	0.00	0.00	808	0.00	0.00	__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::base() const
0.00	0.00	0.00	630	0.00	0.00	__gnu_cxx::__enable_if<std::__is_integer<int>::__value, double>::__type std::sqrt<int>(int)
0.00	0.00	0.00	404	0.00	0.00	bool __gnu_cxx::operator!=<int const*, std::vector<int, std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&)
0.00	0.00	0.00	400	0.00	0.00	__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::operator++()
0.00	0.00	0.00	400	0.00	0.00	__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::operator*() const
0.00	0.00	0.00	299	0.00	0.00	std::vector<int, std::allocator<int> >::operator[] (unsigned long)
0.00	0.00	0.00	102	0.00	0.00	std::vector<int, std::allocator<int> >::size() const
0.00	0.00	0.00	100	0.00	0.00	isEven(int)
0.00	0.00	0.00	100	0.00	0.00	isPrime(int)
0.00	0.00	0.00	100	0.00	0.00	factorial(int)
0.00	0.00	0.00	100	0.00	0.00	std::vector<int, std::allocator<int> >::operator[] (unsigned long) const
0.00	0.00	0.00	8	0.00	0.00	__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::__normal_iterator(int const* const&)
0.00	0.00	0.00	6	0.00	0.00	std::allocator<int>::~allocator()
0.00	0.00	0.00	6	0.00	0.00	std::__new_allocator<int>::~__new_allocator()
0.00	0.00	0.00	4	0.00	0.00	std::__new_allocator<int>::_M_max_size() const
0.00	0.00	0.00	4	0.00	0.00	std::vector<int, std::allocator<int> >::end() const
0.00	0.00	0.00	4	0.00	0.00	std::vector<int, std::allocator<int> >::begin() const
0.00	0.00	0.00	4	0.00	0.00	std::allocator<int>::allocator(std::allocator<int> const&)
0.00	0.00	0.00	4	0.00	0.00	std::_Vector_base<int, std::allocator<int> >::_M_get_Tp_allocator()
0.00	0.00	0.00	4	0.00	0.00	std::__new_allocator<int>::__new_allocator(std::__new_allocator<int> const&)
0.00	0.00	0.00	2	0.00	0.00	printArray(std::vector<int, std::allocator<int> > const&)
0.00	0.00	0.00	2	0.00	0.00	std::__new_allocator<int>::max_size() const
0.00	0.00	0.00	2	0.00	0.00	std::allocator<int>::allocator()
0.00	0.00	0.00	2	0.00	0.00	void std::_Destroy_aux<true>::__destroy<int*>(int*, int*)
0.00	0.00	0.00	2	0.00	0.00	std::_Vector_base<int, std::allocator<int> >::_M_allocate(unsigned long)

 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_Vector_impl::_Vector_impl(std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_Vector_impl::~_Vector_impl()
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_M_deallocate(int*, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_M_create_storage(unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_Vector_impl_data::_Vector_impl_data()
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::_Vector_base(unsigned long, std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 std::_Vector_base<int, std::allocator<int> >::~_Vector_base()
 0.00 0.00 0.00 2 0.00 0.00 std::__new_allocator<int>::deallocate(int*, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::__new_allocator<int>::allocate(unsigned long, void const*)
 0.00 0.00 0.00 2 0.00 0.00 std::__new_allocator<int>::__new_allocator()
 0.00 0.00 0.00 2 0.00 0.00 std::allocator_traits<std::allocator<int> >::deallocate(std::allocator<int>&, int*, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::allocator_traits<std::allocator<int> >::allocate(std::allocator<int>&, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::allocator_traits<std::allocator<int> >::max_size(std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 int* std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::vector<int, std::allocator<int> >::_S_max_size(std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 std::vector<int, std::allocator<int> >::_S_check_init_len(unsigned long, std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 std::vector<int, std::allocator<int> >::_M_default_initialize(unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::vector<int, std::allocator<int> >::vector(unsigned long, std::allocator<int> const&)
 0.00 0.00 0.00 2 0.00 0.00 std::vector<int, std::allocator<int> >::~vector()
 0.00 0.00 0.00 2 0.00 0.00 void std::_Construct<int>(int*)
 0.00 0.00 0.00 2 0.00 0.00 int* std::__fill_n_a<int*, unsigned long, int>(int*, unsigned long, int const&, std::random_access_iterator_tag)
 0.00 0.00 0.00 2 0.00 0.00 int* std::__addressof<int>(int&)
 0.00 0.00 0.00 2 0.00 0.00 std::__size_to_integer(unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 std::iterator_traits<int*>::iterator_category std::__iterator_category<int*>(int* const&)
 0.00 0.00 0.00 2 0.00 0.00 int* std::__uninitialized_default_n<int*, unsigned long>(int*, unsigned long)
 0.00 0.00 0.00 2 0.00 0.00 int* std::__uninitialized_default_n_a<int*, unsigned long, int>(int*, unsigned long, std::allocator<int>&)
 0.00 0.00 0.00 2 0.00 0.00 unsigned long const& std::min<unsigned long>(unsigned long const&, unsigned long const&)
 0.00 0.00 0.00 2 0.00 0.00 int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int const&)

```
  0.00      0.00     0.00        2     0.00     0.00  void std::_Destroy<int*>(int*, int*)
  0.00      0.00     0.00        2     0.00     0.00  void std::_Destroy<int*, int>(int*, int*,
std::allocator<int>&)
  0.00      0.00     0.00        2     0.00     0.00  void std::__fill_a<int*, int>(int*, int*, int const&)
  0.00      0.00     0.00        2     0.00     0.00  __gnu_cxx::__enable_if<std::__is_scalar<int>::__value,
void>::__type std::__fill_a1<int*, int>(int*, int*, int const&)
  0.00      0.00     0.00        2     0.00     0.00  operator new(unsigned long, void*)
  0.00      0.00     0.00        1     0.00     0.00  processArray(std::vector<int, std::allocator<int> >
const&)
  0.00      0.00     0.00        1     0.00     0.00  calculateAverage(std::vector<int, std::allocator<int> >
const&)
  0.00      0.00     0.00        1     0.00     0.00  generateRandomArray(int, int, int)
  0.00      0.00     0.00        1     0.00     0.00  __static_initialization_and_destruction_0(int, int)
  0.00      0.00     0.00        1     0.00     0.00  prefixSum(std::vector<int, std::allocator<int> > const&)
```

```
 %         the percentage of the total running time of the
time       program used by this function.

cumulative a running sum of the number of seconds accounted
 seconds   for by this function and those listed above it.

 self      the number of seconds accounted for by this
seconds    function alone.  This is the major sort for this
           listing.

calls      the number of times this function was invoked, if
           this function is profiled, else blank.

 self      the average number of milliseconds spent in this
ms/call    function per call, if this function is profiled,
           else blank.

 total     the average number of milliseconds spent in this
ms/call    function and its descendents per call, if this
           function is profiled, else blank.

name       the name of the function.  This is the minor sort
           for this listing. The index shows the location of
           the function in the gprof listing. If the index is
           in parenthesis it shows where it would appear in
           the gprof listing if it were to be printed.
```


Call graph (explanation follows)

granularity: each sample hit covers 4 byte(s) no time propagated

index % time   self children   called   name
                0.00   0.00   808/808   bool __gnu_cxx::operator!=<int const*, std::vector<int, std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&) [10]
[8]   0.0   0.00   0.00   808   __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::base() const [8]

                0.00   0.00   630/630   isPrime(int) [16]
[9]   0.0   0.00   0.00   630   __gnu_cxx::__enable_if<std::__is_integer<int>::__value, double>::__type std::sqrt<int>(int) [9]

                0.00   0.00   101/404   calculateAverage(std::vector<int, std::allocator<int> > const&) [67]
                0.00   0.00   101/404   processArray(std::vector<int, std::allocator<int> > const&) [66]
                0.00   0.00   202/404   printArray(std::vector<int, std::allocator<int> > const&) [28]
[10]   0.0   0.00   0.00   404   bool __gnu_cxx::operator!=<int const*, std::vector<int, std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > > const&) [10]
                0.00   0.00   808/808   __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::base() const [8]

                0.00   0.00   100/400   calculateAverage(std::vector<int, std::allocator<int> > const&) [67]
                0.00   0.00   100/400   processArray(std::vector<int, std::allocator<int> > const&) [66]
                0.00   0.00   200/400   printArray(std::vector<int, std::allocator<int> > const&) [28]
[11]   0.0   0.00   0.00   400   __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::operator++() [11]

                0.00   0.00   100/400   calculateAverage(std::vector<int, std::allocator<int> > const&) [67]
                0.00   0.00   100/400   processArray(std::vector<int, std::allocator<int> > const&) [66]
                0.00   0.00   200/400   printArray(std::vector<int, std::allocator<int> > const&) [28]
[12]   0.0   0.00   0.00   400   __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::operator*() const [12]

                0.00   0.00   100/299   generateRandomArray(int, int, int) [68]
                0.00   0.00   199/299   prefixSum(std::vector<int, std::allocator<int> > const&) [70]
[13]   0.0   0.00   0.00   299   std::vector<int, std::allocator<int> >::operator[](unsigned long) [13]

                0.00   0.00   1/102   calculateAverage(std::vector<int, std::allocator<int> > const&) [67]
                0.00   0.00   101/102   prefixSum(std::vector<int, std::allocator<int> > const&) [70]
[14]   0.0   0.00   0.00   102   std::vector<int, std::allocator<int> >::size() const [14]

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-----------------------------------------------
             0.00    0.00     100/100        processArray(std::vector<int, std::allocator<int> > const&)
[66]
[15]     0.0    0.00    0.00     100        isEven(int) [15]
-----------------------------------------------
             0.00    0.00     100/100        processArray(std::vector<int, std::allocator<int> > const&)
[66]
[16]     0.0    0.00    0.00     100        isPrime(int) [16]
             0.00    0.00     630/630        __gnu_cxx::__enable_if<std::__is_integer<int>::__value,
double>::__type std::sqrt<int>(int) [9]
-----------------------------------------------
                        500667             factorial(int) [17]
             0.00    0.00     100/100        processArray(std::vector<int, std::allocator<int> > const&)
[66]
[17]     0.0    0.00    0.00     100+500667  factorial(int) [17]
                        500667             factorial(int) [17]
-----------------------------------------------
             0.00    0.00     100/100        prefixSum(std::vector<int, std::allocator<int> > const&) [70]
[18]     0.0    0.00    0.00     100        std::vector<int, std::allocator<int> >::operator[](unsigned long)
const [18]
-----------------------------------------------
             0.00    0.00       4/8          std::vector<int, std::allocator<int> >::begin() const [24]
             0.00    0.00       4/8          std::vector<int, std::allocator<int> >::end() const [23]
[19]     0.0    0.00    0.00       8        __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::__normal_iterator(int const* const&) [19]
-----------------------------------------------
             0.00    0.00       1/6          generateRandomArray(int, int, int) [68]
             0.00    0.00       1/6          prefixSum(std::vector<int, std::allocator<int> > const&) [70]
             0.00    0.00       2/6          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::~_Vector_impl() [34]
             0.00    0.00       2/6          std::vector<int, std::allocator<int>
>::_S_check_init_len(unsigned long, std::allocator<int> const&) [48]
[20]     0.0    0.00    0.00       6        std::allocator<int>::~allocator() [20]
             0.00    0.00       6/6          std::__new_allocator<int>::~__new_allocator() [21]
-----------------------------------------------
             0.00    0.00       6/6          std::allocator<int>::~allocator() [20]
[21]     0.0    0.00    0.00       6        std::__new_allocator<int>::~__new_allocator() [21]
-----------------------------------------------
             0.00    0.00       2/4          std::__new_allocator<int>::max_size() const [29]
             0.00    0.00       2/4          std::__new_allocator<int>::allocate(unsigned long, void const*)
[41]
[22]     0.0    0.00    0.00       4        std::__new_allocator<int>::_M_max_size() const [22]
-----------------------------------------------
             0.00    0.00       1/4          calculateAverage(std::vector<int, std::allocator<int> > const&)
[67]
             0.00    0.00       1/4          processArray(std::vector<int, std::allocator<int> > const&) [66]
             0.00    0.00       2/4          printArray(std::vector<int, std::allocator<int> > const&) [28]
[23]     0.0    0.00    0.00       4        std::vector<int, std::allocator<int> >::end() const [23]
             0.00    0.00       4/8          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::__normal_iterator(int const* const&) [19]
-----------------------------------------------
```

```
                0.00    0.00       1/4          calculateAverage(std::vector<int, std::allocator<int> > const&)
[67]
                0.00    0.00       1/4          processArray(std::vector<int, std::allocator<int> > const&) [66]
                0.00    0.00       2/4          printArray(std::vector<int, std::allocator<int> > const&) [28]
[24]     0.0    0.00    0.00       4          std::vector<int, std::allocator<int> >::begin() const [24]
                0.00    0.00       4/8          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::__normal_iterator(int const* const&) [19]
-----------------------------------------------
                0.00    0.00       2/4          std::vector<int, std::allocator<int>
>::_S_check_init_len(unsigned long, std::allocator<int> const&) [48]
                0.00    0.00       2/4          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::_Vector_impl(std::allocator<int> const&) [33]
[25]     0.0    0.00    0.00       4          std::allocator<int>::allocator(std::allocator<int> const&) [25]
                0.00    0.00       4/4
std::__new_allocator<int>::__new_allocator(std::__new_allocator<int> const&) [27]
-----------------------------------------------
                0.00    0.00       2/4          std::vector<int, std::allocator<int> >::~vector() [51]
                0.00    0.00       2/4          std::vector<int, std::allocator<int>
>::_M_default_initialize(unsigned long) [49]
[26]     0.0    0.00    0.00       4          std::_Vector_base<int, std::allocator<int>
>::_M_get_Tp_allocator() [26]
-----------------------------------------------
                0.00    0.00       4/4          std::allocator<int>::allocator(std::allocator<int> const&) [25]
[27]     0.0    0.00    0.00       4
std::__new_allocator<int>::__new_allocator(std::__new_allocator<int> const&) [27]
-----------------------------------------------
                0.00    0.00       2/2          main [6]
[28]     0.0    0.00    0.00       2          printArray(std::vector<int, std::allocator<int> > const&) [28]
                0.00    0.00     202/404        bool __gnu_cxx::operator!=<int const*, std::vector<int,
std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&) [10]
                0.00    0.00     200/400        __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator*() const [12]
                0.00    0.00     200/400        __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator++() [11]
                0.00    0.00       2/4          std::vector<int, std::allocator<int> >::begin() const [24]
                0.00    0.00       2/4          std::vector<int, std::allocator<int> >::end() const [23]
-----------------------------------------------
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::max_size(std::allocator<int> const&) [45]
[29]     0.0    0.00    0.00       2          std::__new_allocator<int>::max_size() const [29]
                0.00    0.00       2/4          std::__new_allocator<int>::_M_max_size() const [22]
-----------------------------------------------
                0.00    0.00       1/2          generateRandomArray(int, int, int) [68]
                0.00    0.00       1/2          prefixSum(std::vector<int, std::allocator<int> > const&) [70]
[30]     0.0    0.00    0.00       2          std::allocator<int>::allocator() [30]
                0.00    0.00       2/2          std::__new_allocator<int>::__new_allocator() [42]
-----------------------------------------------
                0.00    0.00       2/2          void std::_Destroy<int*>(int*, int*) [61]
[31]     0.0    0.00    0.00       2          void std::_Destroy_aux<true>::__destroy<int*>(int*, int*) [31]
-----------------------------------------------
```

```
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_create_storage(unsigned long) [36]
[32]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_M_allocate(unsigned long) [32]
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::allocate(std::allocator<int>&, unsigned long) [44]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_base(unsigned long, std::allocator<int> const&) [38]
[33]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::_Vector_impl(std::allocator<int> const&) [33]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl_data::_Vector_impl_data() [37]
                0.00    0.00       2/4          std::allocator<int>::allocator(std::allocator<int> const&) [25]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int> >::~_Vector_base()
[39]
[34]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::~_Vector_impl() [34]
                0.00    0.00       2/6          std::allocator<int>::~allocator() [20]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int> >::~_Vector_base()
[39]
[35]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_M_deallocate(int*, unsigned long) [35]
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::deallocate(std::allocator<int>&, int*, unsigned long) [43]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_base(unsigned long, std::allocator<int> const&) [38]
[36]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_M_create_storage(unsigned long) [36]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_allocate(unsigned long) [32]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::_Vector_impl(std::allocator<int> const&) [33]
[37]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl_data::_Vector_impl_data() [37]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
[38]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int>
>::_Vector_base(unsigned long, std::allocator<int> const&) [38]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::_Vector_impl(std::allocator<int> const&) [33]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_create_storage(unsigned long) [36]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int> >::~vector() [51]
[39]     0.0    0.00    0.00       2          std::_Vector_base<int, std::allocator<int> >::~_Vector_base()
[39]
```

```
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_deallocate(int*, unsigned long) [35]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_impl::~_Vector_impl() [34]
-----------------------------------------------
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::deallocate(std::allocator<int>&, int*, unsigned long) [43]
[40]     0.0    0.00    0.00       2          std::__new_allocator<int>::deallocate(int*, unsigned long) [40]
-----------------------------------------------
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::allocate(std::allocator<int>&, unsigned long) [44]
[41]     0.0    0.00    0.00       2          std::__new_allocator<int>::allocate(unsigned long, void const*)
[41]
                0.00    0.00       2/4          std::__new_allocator<int>::_M_max_size() const [22]
-----------------------------------------------
                0.00    0.00       2/2          std::allocator<int>::allocator() [30]
[42]     0.0    0.00    0.00       2          std::__new_allocator<int>::__new_allocator() [42]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_deallocate(int*, unsigned long) [35]
[43]     0.0    0.00    0.00       2          std::allocator_traits<std::allocator<int>
>::deallocate(std::allocator<int>&, int*, unsigned long) [43]
                0.00    0.00       2/2          std::__new_allocator<int>::deallocate(int*, unsigned long) [40]
-----------------------------------------------
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_M_allocate(unsigned long) [32]
[44]     0.0    0.00    0.00       2          std::allocator_traits<std::allocator<int>
>::allocate(std::allocator<int>&, unsigned long) [44]
                0.00    0.00       2/2          std::__new_allocator<int>::allocate(unsigned long, void const*)
[41]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int>
>::_S_max_size(std::allocator<int> const&) [47]
[45]     0.0    0.00    0.00       2          std::allocator_traits<std::allocator<int>
>::max_size(std::allocator<int> const&) [45]
                0.00    0.00       2/2          std::__new_allocator<int>::max_size() const [29]
-----------------------------------------------
                0.00    0.00       2/2          int* std::__uninitialized_default_n<int*, unsigned long>(int*,
unsigned long) [57]
[46]     0.0    0.00    0.00       2          int*
std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned
long) [46]
                0.00    0.00       2/2          int* std::__addressof<int>(int&) [54]
                0.00    0.00       2/2          void std::_Construct<int>(int*) [52]
                0.00    0.00       2/2          int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int
const&) [60]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int>
>::_S_check_init_len(unsigned long, std::allocator<int> const&) [48]
[47]     0.0    0.00    0.00       2          std::vector<int, std::allocator<int>
>::_S_max_size(std::allocator<int> const&) [47]
```

```
                0.00    0.00       2/2          std::allocator_traits<std::allocator<int>
>::max_size(std::allocator<int> const&) [45]
                0.00    0.00       2/2          unsigned long const& std::min<unsigned long>(unsigned long
const&, unsigned long const&) [59]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
[48]     0.0    0.00    0.00       2          std::vector<int, std::allocator<int>
>::_S_check_init_len(unsigned long, std::allocator<int> const&) [48]
                0.00    0.00       2/4          std::allocator<int>::allocator(std::allocator<int> const&) [25]
                0.00    0.00       2/2          std::vector<int, std::allocator<int>
>::_S_max_size(std::allocator<int> const&) [47]
                0.00    0.00       2/6          std::allocator<int>::~allocator() [20]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
[49]     0.0    0.00    0.00       2          std::vector<int, std::allocator<int>
>::_M_default_initialize(unsigned long) [49]
                0.00    0.00       2/4          std::_Vector_base<int, std::allocator<int>
>::_M_get_Tp_allocator() [26]
                0.00    0.00       2/2          int* std::__uninitialized_default_n_a<int*, unsigned long,
int>(int*, unsigned long, std::allocator<int>&) [58]
-----------------------------------------------
                0.00    0.00       1/2          generateRandomArray(int, int, int) [68]
                0.00    0.00       1/2          prefixSum(std::vector<int, std::allocator<int> > const&) [70]
[50]     0.0    0.00    0.00       2          std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
                0.00    0.00       2/2          std::vector<int, std::allocator<int>
>::_S_check_init_len(unsigned long, std::allocator<int> const&) [48]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int>
>::_Vector_base(unsigned long, std::allocator<int> const&) [38]
                0.00    0.00       2/2          std::vector<int, std::allocator<int>
>::_M_default_initialize(unsigned long) [49]
-----------------------------------------------
                0.00    0.00       2/2          main [6]
[51]     0.0    0.00    0.00       2          std::vector<int, std::allocator<int> >::~vector() [51]
                0.00    0.00       2/4          std::_Vector_base<int, std::allocator<int>
>::_M_get_Tp_allocator() [26]
                0.00    0.00       2/2          void std::_Destroy<int*, int>(int*, int*, std::allocator<int>&)
[62]
                0.00    0.00       2/2          std::_Vector_base<int, std::allocator<int> >::~_Vector_base()
[39]
-----------------------------------------------
                0.00    0.00       2/2          int*
std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned
long) [46]
[52]     0.0    0.00    0.00       2          void std::_Construct<int>(int*) [52]
                0.00    0.00       2/2          operator new(unsigned long, void*) [65]
-----------------------------------------------
                0.00    0.00       2/2          int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int
const&) [60]
```

```
[53]    0.0    0.00    0.00       2         int* std::__fill_n_a<int*, unsigned long, int>(int*, unsigned
long, int const&, std::random_access_iterator_tag) [53]
                0.00    0.00       2/2         void std::__fill_a<int*, int>(int*, int*, int const&) [63]
-----------------------------------------------
                0.00    0.00       2/2         int*
std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned
long) [46]
[54]    0.0    0.00    0.00       2         int* std::__addressof<int>(int&) [54]
-----------------------------------------------
                0.00    0.00       2/2         int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int
const&) [60]
[55]    0.0    0.00    0.00       2         std::__size_to_integer(unsigned long) [55]
-----------------------------------------------
                0.00    0.00       2/2         int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int
const&) [60]
[56]    0.0    0.00    0.00       2         std::iterator_traits<int*>::iterator_category
std::__iterator_category<int*>(int* const&) [56]
-----------------------------------------------
                0.00    0.00       2/2         int* std::__uninitialized_default_n_a<int*, unsigned long,
int>(int*, unsigned long, std::allocator<int>&) [58]
[57]    0.0    0.00    0.00       2         int* std::__uninitialized_default_n<int*, unsigned long>(int*,
unsigned long) [57]
                0.00    0.00       2/2         int*
std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned
long) [46]
-----------------------------------------------
                0.00    0.00       2/2         std::vector<int, std::allocator<int>
>::_M_default_initialize(unsigned long) [49]
[58]    0.0    0.00    0.00       2         int* std::__uninitialized_default_n_a<int*, unsigned long,
int>(int*, unsigned long, std::allocator<int>&) [58]
                0.00    0.00       2/2         int* std::__uninitialized_default_n<int*, unsigned long>(int*,
unsigned long) [57]
-----------------------------------------------
                0.00    0.00       2/2         std::vector<int, std::allocator<int>
>::_S_max_size(std::allocator<int> const&) [47]
[59]    0.0    0.00    0.00       2         unsigned long const& std::min<unsigned long>(unsigned long
const&, unsigned long const&) [59]
-----------------------------------------------
                0.00    0.00       2/2         int*
std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned
long) [46]
[60]    0.0    0.00    0.00       2         int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int
const&) [60]
                0.00    0.00       2/2         std::__size_to_integer(unsigned long) [55]
                0.00    0.00       2/2         std::iterator_traits<int*>::iterator_category
std::__iterator_category<int*>(int* const&) [56]
                0.00    0.00       2/2         int* std::__fill_n_a<int*, unsigned long, int>(int*, unsigned
long, int const&, std::random_access_iterator_tag) [53]
-----------------------------------------------
                0.00    0.00       2/2         void std::_Destroy<int*, int>(int*, int*, std::allocator<int>&)
[62]
[61]    0.0    0.00    0.00       2         void std::_Destroy<int*>(int*, int*) [61]
```

```
                0.00    0.00       2/2          void std::_Destroy_aux<true>::__destroy<int*>(int*, int*) [31]
-----------------------------------------------
                0.00    0.00       2/2          std::vector<int, std::allocator<int> >::~vector() [51]
[62]     0.0    0.00    0.00       2          void std::_Destroy<int*, int>(int*, int*, std::allocator<int>&)
[62]
                0.00    0.00       2/2          void std::_Destroy<int*>(int*, int*) [61]
-----------------------------------------------
                0.00    0.00       2/2          int* std::__fill_n_a<int*, unsigned long, int>(int*, unsigned
long, int const&, std::random_access_iterator_tag) [53]
[63]     0.0    0.00    0.00       2          void std::__fill_a<int*, int>(int*, int*, int const&) [63]
                0.00    0.00       2/2          __gnu_cxx::__enable_if<std::__is_scalar<int>::__value,
void>::__type std::__fill_a1<int*, int>(int*, int*, int const&) [64]
-----------------------------------------------
                0.00    0.00       2/2          void std::__fill_a<int*, int>(int*, int*, int const&) [63]
[64]     0.0    0.00    0.00       2          __gnu_cxx::__enable_if<std::__is_scalar<int>::__value,
void>::__type std::__fill_a1<int*, int>(int*, int*, int const&) [64]
-----------------------------------------------
                0.00    0.00       2/2          void std::_Construct<int>(int*) [52]
[65]     0.0    0.00    0.00       2          operator new(unsigned long, void*) [65]
-----------------------------------------------
                0.00    0.00       1/1          main [6]
[66]     0.0    0.00    0.00       1          processArray(std::vector<int, std::allocator<int> > const&) [66]
                0.00    0.00     101/404          bool __gnu_cxx::operator!=<int const*, std::vector<int,
std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&) [10]
                0.00    0.00     100/400          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator*() const [12]
                0.00    0.00     100/100          isEven(int) [15]
                0.00    0.00     100/100          isPrime(int) [16]
                0.00    0.00     100/100          factorial(int) [17]
                0.00    0.00     100/400          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator++() [11]
                0.00    0.00       1/4          std::vector<int, std::allocator<int> >::begin() const [24]
                0.00    0.00       1/4          std::vector<int, std::allocator<int> >::end() const [23]
-----------------------------------------------
                0.00    0.00       1/1          main [6]
[67]     0.0    0.00    0.00       1          calculateAverage(std::vector<int, std::allocator<int> > const&)
[67]
                0.00    0.00     101/404          bool __gnu_cxx::operator!=<int const*, std::vector<int,
std::allocator<int> > >(__gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&, __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > > const&) [10]
                0.00    0.00     100/400          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator*() const [12]
                0.00    0.00     100/400          __gnu_cxx::__normal_iterator<int const*, std::vector<int,
std::allocator<int> > >::operator++() [11]
                0.00    0.00       1/4          std::vector<int, std::allocator<int> >::begin() const [24]
                0.00    0.00       1/4          std::vector<int, std::allocator<int> >::end() const [23]
                0.00    0.00       1/102          std::vector<int, std::allocator<int> >::size() const [14]
-----------------------------------------------
                0.00    0.00       1/1          main [6]
```

```
[68]     0.0    0.00    0.00       1       generateRandomArray(int, int, int) [68]
                0.00    0.00     100/299       std::vector<int, std::allocator<int> >::operator[](unsigned
long) [13]
                0.00    0.00       1/2         std::allocator<int>::allocator() [30]
                0.00    0.00       1/2         std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
                0.00    0.00       1/6         std::allocator<int>::~allocator() [20]
-----------------------------------------------
                0.00    0.00       1/1         _GLOBAL__sub_I__Z19generateRandomArrayiii [71]
[69]     0.0    0.00    0.00       1       __static_initialization_and_destruction_0(int, int) [69]
-----------------------------------------------
                0.00    0.00       1/1         main [6]
[70]     0.0    0.00    0.00       1       prefixSum(std::vector<int, std::allocator<int> > const&) [70]
                0.00    0.00     199/299       std::vector<int, std::allocator<int> >::operator[](unsigned
long) [13]
                0.00    0.00     101/102       std::vector<int, std::allocator<int> >::size() const [14]
                0.00    0.00     100/100       std::vector<int, std::allocator<int> >::operator[](unsigned
long) const [18]
                0.00    0.00       1/2         std::allocator<int>::allocator() [30]
                0.00    0.00       1/2         std::vector<int, std::allocator<int> >::vector(unsigned long,
std::allocator<int> const&) [50]
                0.00    0.00       1/6         std::allocator<int>::~allocator() [20]
-----------------------------------------------
```

This table describes the call tree of the program, and was sorted by
the total amount of time spent in each function and its children.

Each entry in this table consists of several lines. The line with the
index number at the left hand margin lists the current function.
The lines above it list the functions that called this function,
and the lines below it list the functions this one called.
This line lists:

index — A unique number given to each element of the table.
Index numbers are sorted numerically.
The index number is printed next to every function name so
it is easier to look up where the function is in the table.

% time — This is the percentage of the `total' time that was spent
in this function and its children. Note that due to
different viewpoints, functions excluded by options, etc,
these numbers will NOT add up to 100%.

self — This is the total amount of time spent in this function.

children — This is the total amount of time propagated into this
function by its children.

called — This is the number of times the function was called.
If the function called itself recursively, the number
only includes non-recursive calls, and is followed by
a `+' and the number of recursive calls.

name The name of the current function. The index number is printed after it. If the function is a member of a cycle, the cycle number is printed between the function's name and the index number.

For the function's parents, the fields have the following meanings:

self This is the amount of time that was propagated directly from the function into this parent.

children This is the amount of time that was propagated from the function's children into this parent.

called This is the number of times this parent called the function `/' the total number of times the function was called. Recursive calls to the function are not included in the number after the `/'.

name This is the name of the parent. The parent's index number is printed after it. If the parent is a member of a cycle, the cycle number is printed between the name and the index number.

If the parents of the function cannot be determined, the word `<spontaneous>' is printed in the `name' field, and all the other fields are blank.

For the function's children, the fields have the following meanings:

self This is the amount of time that was propagated directly from the child into the function.

children This is the amount of time that was propagated from the child's children to the function.

called This is the number of times the function called this child `/' the total number of times the child was called. Recursive calls by the child are not listed in the number after the `/'.

name This is the name of the child. The child's index number is printed after it. If the child is a member of a cycle, the cycle number is printed between the name and the index number.

If there are any cycles (circles) in the call graph, there is an entry for the cycle-as-a-whole. This entry shows who called the cycle (as parents) and the members of the cycle (as children.) The `+' recursive calls entry shows the number of function calls that were internal to the cycle, and the calls entry for each member shows, for that member, how many times it was called from other members of

the cycle.

Index by function name

std::__uninitialized_default_n_a<int*, unsigned long, int>(int*, unsigned long, std::allocator<int>&)
  [12] __gnu_cxx::__normal_iterator<int const*, std::vector<int, std::allocator<int> > >::operator*() const [41] std::__new_allocator<int>::allocate(unsigned long, void const*) [59] unsigned long const& std::min<unsigned long>(unsigned long const&, unsigned long const&)
  [22] std::__new_allocator<int>::_M_max_size() const [27] std::__new_allocator<int>::__new_allocator(std::__new_allocator<int> const&) [9] __gnu_cxx::__enable_if<std::__is_integer<int>::__value, double>::__type std::sqrt<int>(int)
  [29] std::__new_allocator<int>::max_size() const [42] std::__new_allocator<int>::__new_allocator() [60] int* std::fill_n<int*, unsigned long, int>(int*, unsigned long, int const&)
  [23] std::vector<int, std::allocator<int> >::end() const [21] std::__new_allocator<int>::~__new_allocator() [61] void std::_Destroy<int*>(int*, int*)
  [14] std::vector<int, std::allocator<int> >::size() const [43] std::allocator_traits<std::allocator<int> >::deallocate(std::allocator<int>&, int*, unsigned long) [62] void std::_Destroy<int*, int>(int*, int*, std::allocator<int>&)
  [24] std::vector<int, std::allocator<int> >::begin() const [44] std::allocator_traits<std::allocator<int> >::allocate(std::allocator<int>&, unsigned long) [63] void std::__fill_a<int*, int>(int*, int*, int const&)
  [18] std::vector<int, std::allocator<int> >::operator[](unsigned long) const [45] std::allocator_traits<std::allocator<int> >::max_size(std::allocator<int> const&) [64] __gnu_cxx::__enable_if<std::__is_scalar<int>::__value, void>::__type std::__fill_a1<int*, int>(int*, int*, int const&)
  [25] std::allocator<int>::allocator(std::allocator<int> const&) [46] int* std::__uninitialized_default_n_1<true>::__uninit_default_n<int*, unsigned long>(int*, unsigned long) [65] operator new(unsigned long, void*)