```cpp
/* The following code example is taken from the book
 * "The C++ Standard Library - A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include "algostuff.hpp"
using namespace std;

int main()
{
    deque<int> coll;

    INSERT_ELEMENTS(coll,3,7);
    INSERT_ELEMENTS(coll,2,6);
    INSERT_ELEMENTS(coll,1,5);
    PRINT_ELEMENTS(coll);

    // extract the four lowest elements
    nth_element (coll.begin(),      // beginning of range
                 coll.begin()+3,    // element that should be sorted correctly
                 coll.end());       // end of range

    // print them
    cout << "the four lowest elements are:   ";
    copy (coll.cbegin(), coll.cbegin()+4,
          ostream_iterator<int>(cout," "));
    cout << endl;

    // extract the four highest elements
    nth_element (coll.begin(),      // beginning of range
                 coll.end()-4,      // element that should be sorted correctly
                 coll.end());       // end of range

    // print them
    cout << "the four highest elements are: ";
    copy (coll.cend()-4, coll.cend(),
          ostream_iterator<int>(cout," "));
    cout << endl;

    // extract the four highest elements (second version)
    nth_element (coll.begin(),      // beginning of range
                 coll.begin()+3,    // element that should be sorted correctly
                 coll.end(),        // end of range
                 greater<int>());   // sorting criterion

    // print them
    cout << "the four highest elements are: ";
    copy (coll.cbegin(), coll.cbegin()+4,
          ostream_iterator<int>(cout," "));
    cout << endl;
}
```