

# Read-only Algorithms

## Exercises

- Write a program which uses a loop to display the number of 1's in the vector {3, 1, 4, 1, 5, 9}
- Write a program which performs the same task without calling a standard algorithm function
- Alter your programs to display the number of 3's in the vector

- What is the difference between `count()` and `count_if()`?
- What arguments does `count_if()` take?
- Write a program which uses a loop to display the number of elements in the vector `{3, 1, 4, 1, 5, 9}` which are odd
- Write a program which performs the same task by calling a standard algorithm function
- Alter your programs to display elements whose value is greater than or equal to 3

- What is the difference between `find()` and `find_if()`?
- What arguments does `find_if()` take?
- Write a program which uses a loop to display the first element in the vector { "a", "collection", "of", "words", "with", "varying", "lengths" } which contains more than 5 characters
- Write a program which performs the same task by calling a standard algorithm function

- What does `equal()` do?
- What arguments does `equal()` take?
- Write a program that uses a loop to compare the vectors `{3, 1, 4, 1, 5, 9}` and `{3, 1, 4, 1, 5, 9}`
- Write a program which performs the same task by calling a standard algorithm function
- What are the results of comparing the vectors `{3, 1, 4, 1, 5, 9, 2}` and `{3, 1, 4, 1, 5}` ?