**PLANNING A COMPLEX ALGORITHM**

**DESIGN THE ROUTINE**

CHECK PREREQUISITES

Define the problem

Information the routine will hide

Inputs to the routine

Outputs from the routine

Pre-conditions

Post-conditions

Name the Routine

Decide how to test the routine

Research functionality available in standard libraries

Think about error handling

Think about efficiency

Research algorithms & data types

**WRITE PSEUDOCODE**

1. Think about the data
2. Check the pseudocode
3. Try ideas in pseudocode

**CODE THE ROUTINE**

1. Write the declaration
2. Turn pseudocode into comments
3. Fill in code below comments
4. Check if code can be factored

**CHECK THE CODE**

1. Mentally check for errors
2. Step through in Debugger
3. Test the code
4. Remove errors in the code
5. Clean up