CPS 171 Answers to Exam Review Questions for Test 3 that are not in the book

Chapter 8

4. x = 3 after the call to DoReference.
    x = 16 after the call to DoValue.
    x = 17 after the call to DoLocal.
    x = 7 after the call to DoGlobal.

6. Within the function, n is decremented down to zero. Because n is passed by reference rather than by value, the caller's second parameter contains zero upon return from the function.

9. a. −0.5
    b. 0.5

Chapter 10

4. a. defg b. F 70

8. The expression has the value FALSE.

10. a. invalid   b. valid   c. valid

11. True

Chapter 11

1. Record (struct)   A heterogeneous data structure in which the components are accessed by name, not by index

    Member   A component of a struct

    Member selector   The expression used to access a member of a struct variable; composed of the name of the struct variable and the member name, separated by a dot (period)

    Hierarchical record A record that contains another record as a component

    Data abstraction   The separation of the logical properties of a data type from its implementation details

3. if (currentDate.year != machine.history.lastServiced.year)

4. #include <string>   ??
    ??????? ?
    person.name.first = "Beverly";
    person.name.last = "Johnson";
    person.place.city = "La Crosse";
    person.place.state = "WI";
    person.place.zipCode = 54601;

9. Instantiate   Create an object or variable of a given type

    const member function A class member function that is allowed to inspect but not to modify the private data members

    Specification file   A header file containing the declaration but not the implementation of a class

    Implementation file   A file containing function definitions of class member functions (and perhaps auxiliary or "helper" functions that are not members of the class)

10. a. `int TimeType::CurrentHrs() const`
```
       // Postcondition:
       //      Function value == hrs

       {  return hrs;  }
```

b. `int TimeType::CurrentMins() const`
```
       // Postcondition:
       //      Function value == mins

       {  return mins;  }
```

c. `int TimeType::CurrentSecs() const`
```
       // Postcondition:
       //      Function value == secs

       {  return secs;  }
```

12.

Scope resolution operator	The `::` operator that is used in the function heading of a member function definition; it is preceded by the class name and followed by the member function name
Separate compilation	The process of compiling each file of a multifile program independently of the others
C++ class constructor	A class member function that is implicitly invoked whenever a class object is created
Default constructor	A parameterless class constructor

13. a. `SomeClass obj1(0.0);`
   b. `SomeClass obj2;`
      or
      `SomeClass obj2(8.6);`

14. The member function `SomeClass()` is a class constructor and must be declared without a return value type