

22

Inheritance and Interfaces

Self-review Questions

- 22.1** *What is the output from running Inheritance1? Why is this the output?*
- 22.2** *What is the output from running Inheritance2? Why is this the output?*
- 22.3** *What is the output from running Override1? Why is this the output?*
- 22.4** *What is the output from running Final1? Why is this the output?*
- 22.5** *Referring to the MethodCallExample4 example on page 742, what happens with the following calls:*

```
s.f ( 1.0 , 1.0 ) ;  
s.f ( 1.0f , 1 ) ;  
s.f ( 1.0f , 1.0f ) ;  
s.f ( 1L , 1 ) ;  
s.f ( 1L , 1L ) ;
```

- 22.6** *Looking at the Call1 program:*
- 1. Which methods are overridden and which overloaded?*
 - 2. What does the program display?*
 - 3. What is the significance of the last statement?*
- 22.7** *What does program Lookup1 display? Why is this the output?*
- 22.8** *What does program Super2 display? Why is this the output?*
- 22.9** *What does program Abstract1 display? Why is this the output?*

Programming Exercises

- 22.1** *Write a program incorporating all the different varieties of scope that displays the variable and method search algorithm, i.e. verifies the published variable and method lookup rules.*

- 22.2** Write a program based on the outline on page 742 to verify that the most specific rules work when a method with two or more reference type parameters is used.
- 22.3** Write a program to explore the interaction between member classes, containment and inheritance hierarchies, and overloaded methods and overridden methods.