

## Chapter 5 Homework

**Multiple Choice**

- |      |       |       |
|------|-------|-------|
| 1. A | 7. B  | 13. A |
| 2. B | 8. A  | 14. A |
| 3. C | 9. C  | 15. D |
| 4. D | 10. B | 16. B |
| 5. A | 11. A | 17. D |
| 6. A | 12. D | 18. B |

**True and False**

- |           |           |
|-----------|-----------|
| 19. True  | 23. False |
| 20. False | 24. True  |
| 21. False | 25. True  |
| 22. False | 26. False |

**Find the Error**

Completely refactored.

```
int total = 0;
for (int i = 1; i <= 100; ++i)
    total += i;
```

```
System.out.println("The sum of the numbers 1 - 100 is " + total);
```

**Algorithm Workbench**

```
2. Scanner s = new Scanner(System.in);

System.out.println("Two Number Addition Application");

do
{
    System.out.print("\nEnter a number: ");
    int a = s.nextInt();
    System.out.print("Enter another: ");
    int b = s.nextInt();

    System.out.printf("\nSum: %d\nGo again? [n]: ");
}
while ((char)System.in.read() == 'y');
```

**Short Answer**

- Pre-increment: `n += 1; return n`  
Post-increment: `temp = n; n += 1; return temp`
- Whitespace gives a good visual indication of nested logic.
- A pretest tests the loop condition before each iteration, after for a posttest.
- A loop contains a condition required for the block to be executed.
- A do-while loop will execute its block once before it begins testing.
- A while loop is the proper tool.