

## Chapter 4 Homework

**Multiple Choice**

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

**True and False**

- |           |          |           |
|-----------|----------|-----------|
| 15. False | 17. True | 19. False |
| 16. True  | 18. True | 20. True  |

**Find the Error**

Changes have been highlighted.

```
if (average == 100)
    System.out.println("Perfect Average!");
```

**Algorithm Workbench**

```
2. // Better: x = y == 10 ? 0 : 1;
   if (y == 10)
       x = 0;
   else x = 1;
```

**Short Answer**

1. A statement is conditionally executed when there are a certain set of requirements for the statement to be run.
2. There is no semicolon placed after the `if` condition, doing so will cause an error.
3. Indentation improves clarity of code by showing the nesting of logical groups of code visually.
4. You'll get an error, the `==` operator only compares naive types.
5. A flag variable indicates whether a condition exists in a program. It should be a `boolean`.
6. If none of the conditions are satisfied, nothing will happen.