Java Assignment Chapter 2

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2.1

a) A(n) left brace { begins the body of every method, and a(n) right brace } ends the body of every method.  
b) You can use the if statement to make decisions.  
c) // begins an end-of-line comment.  
d) Spaces, tabs, and newlines are called white space.  
e) Keywords (or reserved words) are reserved for use by Java.  
f) Java applications begin execution at method main.  
g) Methods System.out.print, System.out.println, and System.out.printf display information in a command window.

2.2

a) False – Comments are ignored by the compiler and do not appear in program output.  
b) True – Every variable in Java must have a type when declared.  
c) False – Java is case-sensitive, so number and NuMbEr are different variables.  
d) False – The remainder operator % can be used with both integer and floating-point operands.  
e) False – The operators \*, /, and % have higher precedence than + and -.

2.7

a) Comments are used to document a program and improve its readability.  
b) A decision can be made in a Java program with a(n) if statement.  
c) Calculations are normally performed by assignment statements.  
d) The arithmetic operators with the same precedence as multiplication are division (/) and modulus (%).  
e) When parentheses in an arithmetic expression are nested, the innermost set of parentheses is evaluated first.  
f) A location in the computer’s memory that may contain different values at various times throughout the execution of a program is called a(n) variable.

2.9

a) False – Operator precedence determines order, not left-to-right.  
b) True – All listed variable names are valid.  
c) False – Operator precedence affects evaluation order.  
d) True – Variable names cannot start with numbers.

2.10

a) x = 2  
b) Value of 2 + 2 is 4  
c) x = (prints "x =" without newline)  
d) 5 = 5

2.11 Modified Variables

a) Yes – p = i + j + k + 7; modifies p.  
b) No – System.out.println(...) does not modify variables.  
c) No – Just prints text.  
d) Yes – value = input.nextInt(); assigns user input to value.

2.12 Correct Java statements

Correct ones:

* a) y = a \* x \* x \* x + 7;
* d) y = (a \* x) \* x \* x + 7;
* e) y = a \* (x \* x \* x) + 7;

2.13 Operator Precedence

a) 7 + 3 \* 6 / 2 - 1 = 7 + 18 / 2 - 1 = 7 + 9 - 1 = 15  
b) 2 % 2 + 2 \* 2 - 2 / 2 = 0 + 4 - 1 = 3  
c) 3 \* 9 \* (3 + (9 \* 3 / 3)) = 3 \* 9 \* (3 + 9) = 3 \* 9 \* 12 = 324