Chapter 2

Self-Review Exercises

2.1 Fill in the blanks in each of the following statements:

a) A(n) \_{\_ begins the body of every method, and a(n) \_}\_ ends the body of every method.

\*\_{ (left brace) and } (right brace)\*

b) You can use the \_if\_ statement to make decisions.

c) \_//\_begins an end-of-line comment.

d) \_Space characters, tabs and newlines\_ , \_ \_and \_ \_are called white space.

e) \_Keywords\_ 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 State whether each of the following is true or false. If false, explain why.

a) \*False. Comments do not cause any output; they are ignored by the compiler.\*

b) \*True.\*

c) \*False. Java is case sensitive; number and NuMbEr are different identifiers.\*

d) \*False. The remainder operator (%) returns the remainder of integer division. It can also be used with floating-point numbers.\*

e) \*False. The operators \*, / and % all have the same (higher) precedence, which is higher than that of + and -.\*

2.3 Write statements to accomplish each of the following tasks:

a) \*int c, thisIsAVariable, q76354, number;\*

b) \*System.out.print("Enter an integer: ");\*

c) \*int value = input.nextInt();\*

d) \*System.out.println("This is a Java program");\*

e) \*System.out.printf("%s%n%s%n", "This is a Java", "program");\*

f) \*if (number != 7) System.out.println("The variable number is not equal to 7");\*

2.4 Identify and correct the errors in each of the following statements:

a) \*Error: The semicolon ; after the if makes the body of the if an empty statement (the print statement always executes).\*

\*Corrected: if (c < 7) System.out.println("c is less than 7");\*

b) \*Error: => is not a valid operator.\*

\*Corrected: if (c >= 7) System.out.println("c is equal to or greater than 7");\*

2.5 Write declarations, statements or comments that accomplish each of the following tasks:

a) \*// Calculates the product of three integers\*

b) \*Scanner input = new Scanner(System.in);\*

c) \*int x, y, z, result;\*

d) \*System.out.print("Enter first integer: ");\*

e) \*x = input.nextInt();\*

f) \*System.out.print("Enter second integer: ");\*

g) \*y = input.nextInt();\*

h) \*System.out.print("Enter third integer: ");\*

i) \*z = input.nextInt();\*

j) \*result = x \* y \* z;\*

k) \*System.out.printf("Product is %d%n", result);\*

2.6 Using the statements you wrote in Exercise 2.5, write a complete program that calculates and prints the product of three integers.

\*import java.util.Scanner;\*

\*public class Product {\*

\* public static void main(String[] args) {\*

\* // Calculates the product of three integers\*

\* Scanner input = new Scanner(System.in);\*

\* int x, y, z, result;\*

\* System.out.print("Enter first integer: ");\*

\* x = input.nextInt();\*

\* System.out.print("Enter second integer: ");\*

\* y = input.nextInt();\*

\* System.out.print("Enter third integer: ");\*

\* z = input.nextInt();\*

\* result = x \* y \* z;\*

\* System.out.printf("Product is %d%n", result);\*

\* }\*

\*}\*

Exercises

2.7 Fill in the blanks in each of the following statements:

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\_ .

c) Calculations are normally performed by \_assignment\_ statements.

d) The arithmetic operators with the same precedence as multiplication are \_division\_ and \_remainder\_ .

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\_ .

2.8 Write Java statements that accomplish each of the following tasks:

a) \*System.out.print("Enter an integer: ");\*

b) \*a = b \* c;\*

c) \*// Performs a sample payroll calculation\*

2.9 State whether each of the following is true or false. If false, explain why.

a) \*True.\*

b) \*False. Variable names cannot contain $. Valid variable names are \_under\_bar\_, m928134, t5, j7, a, c, z and z2.\*

c) \*False. Operators of same precedence are evaluated from left to right, except for assignment operators, which are evaluated from right to left.\*

d) \*True.\*

[... continued in the downloadable .docx for full length, including updated 2.34 with current data as of October 30, 2025: World Population = 8,254,447,501, Growth Rate = 0.84% <grok-card data-id="ce4a28" data-type="citation\_card"></grok-card>]