|  |  |  |
| --- | --- | --- |
| **APCS Exposure Java** | **Exercises 03.07-12** | **Date:** |
| **Name:** | | **Period:** |

1. Which data type is used to process individual characters?

2. Which data type is used to process sets of one or more characters?

3. What kind of *quotes* are used with strings?

4. What kind of *quotes* are used with individual characters?

5. In program ***Java0313.java***, what is accomplished by the statement: **c1 = c2 = c3 = 'Q';** ?

6. Refer to the previous question. What is the name for this type of short cut?

7. What is the fancy name for using the plus ( + ) sign to join strings together?

8. The plus ( + ) sign can be used to add integers and real numbers. It can also be used to join strings.

What is it called when one operator can perform different functions.

9. What is **“2” + “3”** ?

10. Who invented a form of Algebra based on logical statements that are either **true** or **false**?

11. Today, in computer science, a data type that has only two values of **true** and **false** is a called a \_\_\_\_\_\_\_ data type.

12. What is Java’s formal language for the term *simple data types*?

13. Say you want to use the mathematical value of **E** (another non-repeating decimal similar to **PI**) in your program with value of **2.718281828**. This value will never change in your program.

Print the proper way to define and initialize this constant.

14. What are the 4 data types that will be tested on the AP Exam?

15. What happens when you attempt to alter the value of a *constant*?

16. What does Java call *constants*?

17. What is the first form of *program documentation*?

18. Why were computer programs in the 1960s and the 1970s often written with single-letter variables?

19. What is a *self-commenting variable*?

20. Look at programs ***Java0317.java*** and ***Java0318.java***. Both programs do the exact same thing.

Why is the second program so much easier to understand?

21. The age of single-letter variables is gone. Variables should now be \_\_\_\_\_\_\_ or \_\_\_\_\_\_\_.

22. Suppose you are writing a program to compute the average of a list of numbers.

What name should you give the variable that stores the **average**?

23. In a well-documented program, are *single-line comments* or *multi-line comments* necessary in a program that already uses good *­self-commenting variables*?

24. Does Java follow the same *Order of Operations* that you learned in your Math class?

25. Translate **7abc** into Java source code.

**x + 3**

26. Translate ————— into Java source code.

**2x - 7**

27. Translate “one half” into Java source code.

28. What is the output of: **System.out.println( 10 / 3 );** ?

29. What is the output of: **System.out.println( (double) 10 / 3 );** ?

30. What is an *escape sequence*?

31. What does the escape sequence **\n** do?

32. What escape sequence is used to generate a <tab>?

33. Why do we need escape sequences to generate backslash ( **\** ) and quote ( **"** ) characters?