



Beginning RPG 152-115

Chapter 5

Student Name _____
Score _____ / 20

1 point for each correct answer.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- _____ 1. RPG IV's primary assignment operation is EVAL. It can be used to assign the value *ON to an indicator and to assign values to numeric fields.
- _____ 2. Even if you don't understand how a computer rounds, RPG IV can be easily directed to make certain it takes place. Enter an H, for half-adjust, within parentheses, (H) immediately following the operation code. This directive to round is called an operation extender.
- _____ 3. Truncation is important to understand because if it occurs during the execution of a program, it may simply continue to run without issuing a warning that digits have been lost. Or the program may end abnormally.
- _____ 4. It is important as a programmer to allow sufficient room for result fields. When a calculation produces an answer too large to store in the result field, a run-time error occurs as RPG IV is unable to truncate without numeric specifications.
- _____ 5. To avoid truncation when adding two values, you should define the result field with one more position to the right of the decimal than the larger of the addend's integer digit positions.
- _____ 6. RPG IV's assignment operation is Eval (Evaluate Expression).
- _____ 7. RPG IV lets you assign figurative constant *Zero (or *Zeros) to numeric variables to fill the variables with zeros. You can also assign the special values *Hival and *Loval to numeric variables. *Hival is the maximum positive value allowed for the data representation; for example, for a packed or zoned decimal variable *Hival is all 9s and a plus sign (+).
- _____ 8. You can also use any of the rules of precedence to convert character expressions to numeric representation. This feature is useful when you need to use a character variable's value within an arithmetic expression. The character value must, of course, ultimately be numeric information.
- _____ 9. The %Dec (Convert to packed decimal format) function converts the result of a numeric, character or date expression to a packed decimal format of the precision you specify.
- _____ 10. The %Rem (Remainder) is sometimes called modulus.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question

- _____ 11. RPG IV's primary assignment operation _____ simply means giving a field a value.
- EXPROPTS.
 - EVAL.
 - DOW.
 - DETAIL.
- _____ 12. When storing the results of a field that has fewer decimal positions than the calculated answer, you should round your answer rather than let the system truncate it. Rounding is also known as:
- Half-adjusting.
 - Positions ruling.
 - Data-type conversion.
 - The MVR operation.
- _____ 13. Several of the BIFs (built-in functions) for RPG IV include:
- %ABS, %MVR, and %REM.
 - %ABS, %DIV, and %MOVEL.
 - %DIV, %MVR, and %REM.
 - %ABS, %DIV, and %REM.
- _____ 14. Exponentiation is defined as:
- Low-level truncation to round.
 - Decrementing a counter to decrease the value of an accumulator.
 - Raising a value to a power.
 - A powerful free-form method for assigning numeric fields.
- _____ 15. RPG IV supports a set of specific arithmetic operations. EVAL is preferred but in earlier releases you may need to use a specific operation that EVAL cannot perform in that release. Which is not considered a specific arithmetic operation?
- SUB (H).
 - TOT(H).
 - DIV(H).
 - ADD(H).
- _____ 16. Digit loss from the left of the decimal position in the result field is called:
- Exponentiation.
 - Rounding.
 - High-order truncation.
 - None of these.

- _____ 17. The computer stores the result of any arithmetic expression in the result field based on decimal position alignment. If the value to be stored is too large for the result field, overflow or truncation occurs, resulting in a runtime error or a loss of digits. If the overflow occurs on the left hand side (high order digits portion) of the result, a/an:
- Operation extender occurs.
 - High order overflow error occurs.
 - Low-order truncation error occurs.
 - Numeric overflow error occurs.
- _____ 18. RPG is a strictly typed language - all operands in an expression must be of compatible data types; the program cannot mix numeric data and character variables in the same expression. Several built in functions convert character expressions to numeric formats, or force numeric expressions into a specific numeric size. The %Unsh function:
- Converts to floating point format.
 - Converts to unsigned integer format with half adjust.
 - Converts to unsigned integer format.
 - Converts to signed integer format.
- _____ 19. When the arithmetic expression contains more than one operator, the computer uses the rules of precedence from mathematics to determine the order in which to perform the operations. That order is:
- Exponentiation, multiplication, division, addition and subtraction.
 - Exponentiation, division, multiplication, addition and subtraction.
 - Exponentiation, multiplication, division, addition and subtraction.
 - Exponentiation, multiplication, division, addition and subtraction.
- _____ 20. RPG offers several compound arithmetic assignment operators: +=, -=, *=, /= and **, which allow you to code this common type of expression in a more concise manner. They perform the requested arithmetic function:
- To fit the value in the result variable's decimal positions.
 - Then evaluates complex expressions from left to right, automatically allocating memory for any intermediate values the operation may need to evaluate an expression.
 - Until the expression is completely evaluated and ready to be stored in the result field.
 - Using the result variable as the first operand of the operation.