

TRUE/FALSE

```
float totalAmount = 23.57;
```

1. The float compile-time initialization above will produce an error because it is missing the type specifier (f or F).

ANS: T PTS: 1 REF: 86

```
moreData = true;
```

2. An error will be produced when moreData is assigned the boolean variable shown above because the keyword true should be enclosed in double quotation marks.

ANS: F PTS: 1 REF: 87

3. An appropriate identifier used to store the total transaction amount is total\$Amount.

ANS: F PTS: 1 REF: 71

4. Both static and constant are keywords in C#.

ANS: F PTS: 1 REF: 72

5. Classes, methods, namespaces, and properties follow the Pascal case naming convention, which indicates that the first letter in the identifier is in lowercase and the first letter of each subsequent concatenated word is capitalized.

ANS: F PTS: 1 REF: 73

6. Classes are actually implemented through types in C#.

ANS: F PTS: 1 REF: 77

7. An int variable would be the most appropriate type for a memory location that will be used to store the monthly membership dues for the computer club.

ANS: F PTS: 1 REF: 77

8. Constants are normally named using all lowercase characters, separating second and subsequent words with the underscore character.

ANS: F PTS: 1 REF: 73

9. The decimal equivalent for 3.42e-5 in scientific notation is .00342.

ANS: F PTS: 1 REF: 85

10. The decimal value type is appropriate for storing monetary data items because it provides for greater precision.

ANS: T PTS: 1 REF: 86

11. In order to do a compile-time initialization of a decimal type, it is necessary to add a `d` or `D` onto the end of the value.

12. The bool data type can take on values of true/false or on/off.

13. The result of $25 \% 4$ is 6.25.

14. The result of “123” + “321” is “123321”.

15. If aNumber is declared to be of type int with a value of 50, Console.out.WriteLine(aNumber++); displays 51.

- Placing the two plus symbols (++) before an identifier causes one to be added to the memory location referenced by the variable prior to any other statement's execution.

17. The symbols +=, -=, and *=, compound operators in C#, are used to provide a shortcut way to write assignment statements using the result as part of the computation.

18. The assignment operators ($=$, $+=$, $-=$, $*=$, and $/=$) represent operations that appear at the top of the hierarchy in the order of operations.

19. C# allows you to mix numeric integral types and floating-point types in an expression.

20. When you desk check the algorithm, you can compare the results obtained from the program with calculator results.

21. The value \$78,888.90 is printed as output when the {0:c} format specifier is used in the following Write statement: Console.WriteLine("{0:c}", 78888.894);

22. The base-2 number system is also called the binary number system.

ANS: T PTS: 1 REF: 66

23. The binary value for ten is 00001010.

ANS: T PTS: 1 REF: 67

24. The number 11111111 in binary is equivalent to the number 255 in decimal.

ANS: T PTS: 1 REF: 67

25. Base 16, also called the octal numbering system, uses powers of sixteen.

ANS: F PTS: 1 REF: 68

26. Hexadecimal uses the symbols 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G.

ANS: F PTS: 1 REF: 68

27. With only eight bits, you can represent 2^8 or 256 different decimal values.

ANS: T PTS: 1 REF: 69

28. Unicode includes representation of 2^8 or 256 unique characters.

ANS: F PTS: 1 REF: 69

29. A machine that has a 64-bit processor can process 64 characters at one time.

ANS: F PTS: 1 REF: 66

30. When you think about a machine that has 60 gigabytes of hard disk space, you can store 60 million characters.

ANS: F PTS: 1 REF: 70

MULTIPLE CHOICE

1. Which of the following is a valid identifier?

- | | |
|---------------------------|---------------|
| a. score#1 | c. finalGrade |
| b. amount owed by student | d. 4thExam |

ANS: C PTS: 1 REF: 71

2. The number 3.45 is an example of a(n) ____ type.

- | | |
|---------|-------------------|
| a. bool | c. floating point |
| b. int | d. char |

ANS: C PTS: 1 REF: 77

3. The value true could be stored in a variable of ____ type.

- | | |
|------------|-------------------|
| a. bool | c. char |
| b. decimal | d. floating point |

ANS: A PTS: 1 REF: 87

4. The special character that can be used with an identifier is ____.
- a. -
 - b. _
 - c. *
 - d. #

ANS: B PTS: 1 REF: 71

5. Which statement subtracts 100 from the original value of an answer?
- a. 100 -= answer;
 - b. answer = 100 -;
 - c. answer -= 100;
 - d. answer -= 100;

ANS: D PTS: 1 REF: 99

6. Given the following declarations, what is stored in ans as a result of the arithmetic expression?

```
int ans = 0, v1 = 5, v2 = 8;  
ans = v2 % v1++;
```

- a. 1.3333
- b. 1.6
- c. 2
- d. 3

ANS: D PTS: 1 REF: 100

7. What is stored in ans as a result of the arithmetic expression, given the following declarations?

```
int ans = 5, v1 = 2, v2 = 10, v3 = 18;  
ans += v1 + 10 * (v2-- / 5) + v3 / v2;
```

- a. 27
- b. 12
- c. 29
- d. none of the above

ANS: C PTS: 1 REF: 100

8. Which of the following formats the first argument to display an amount with two digits to the right of the decimal?

- a. {0:C}
- b. {0:c}
- c. {0:f2}
- d. all of the above

ANS: D PTS: 1 REF: 105

9. One convention used for naming identifiers is called Pascal case. This convention requires that ____.

- a. the first letter be lowercase with the first letter of each subsequent word capitalized
- b. all letters appear in uppercase characters
- c. the first letter be uppercase with the first letter of each subsequent word capitalized
- d. all letters appear in lowercase with words separated by an underscore

ANS: C PTS: 1 REF: 73

10. Probably the most important rule for naming identifiers is ____.

- a. do not use over 12 characters for the identifier
- b. number the identifiers and begin each identifier with a numeric character representing its number
- c. use a lowercase character for the first character of the identifier
- d. be descriptive and select a meaningful name

ANS: D PTS: 1 REF: 73

11. Which of the following would be the most appropriate identifier for a memory location that will store the amount of rainfall for a given period of time?

- a. time
- b. amount of rain
- c. amountOfRain
- d. amountofrainforsomeperiodoftime

ANS: C PTS: 1 REF: 72-73

12. Which of the following is a valid compile-time initialization for amountDue, a floating point variable of the double type, that will initially be set to zero?

- a. amountDue = 0;
- b. amountDue = '0';
- c. amountDue = 0m;
- d. amountDue = 0f;

ANS: A PTS: 1 REF: 86

13. Which of the following is a valid compile-time initialization for amountDue, a variable of the decimal type, that will initially be set to zero?

- a. amountDue = 0;
- b. amountDue = '0';
- c. amountDue = 0m;
- d. amountDue = 0d;

ANS: C PTS: 1 REF: 87

14. A variable of type bool can store ____.

- a. "true"
- b. TRUE
- c. true
- d. all of the above

ANS: C PTS: 1 REF: 87

15. A valid string literal representing the last month of the year is ____.

- a. 12
- b. "December"
- c. lastMonthOfTheYear
- d. December

ANS: B PTS: 1 REF: 94

16. Which of the following integral type can NOT be used to store negative values?

- a. sbyte
- b. long
- c. int
- d. uint

ANS: D PTS: 1 REF: 83

17. What would be stored in answer after the following arithmetic expression involving only integers, if the sign of the dividend is negative?

int answer = -19 % -4;

- a. -3
- b. 3
- c. 4.75
- d. -4.75

ANS: A PTS: 1 REF: 94

18. The value stored in answer after the following expression is evaluated is

int v1 = 10, v2 = 5, ans = 3;

ans += --v1 * v2++;

- a. 39
- b. 48
- c. 57
- d. none of the above

ANS: B PTS: 1 REF: 100

19. Which of the following expressions would be evaluated first?

- c. $v2 * v3$
d. $v3 \% 2$

REF: 100

20. Another way to write the following expression is ____.

```
ans *= v1 - 1;
```

- a. `ans = v1 * ans - 1;` c. `ans = ans * v1--;`
b. `ans = v1 * (ans - 1);` d. `ans = ans * --v1;`

REF: 100

21. For a mixed expression equation involving an integer and a double, the result is a(n) ____.

- a. error c. int
b. double d. float

REF: 102

22. The result of the following expression is _____.

```
double ans, v1 = 45.7, v2 = 10.5;
```

```
int v3 = 5;
```

```
ans = (int) v1 + v2 / (double) v3;
```

- a. 48.8 c. 48
b. 47.1 d. 47

REF: 100

23. In order to format the first argument in the `WriteLine` method so that it prints the value 5343.67 as \$5,343.67 with a comma and a dollar symbol, you would insert the following format string as the argument to the `WriteLine()` ____.

- a. “{0:\$,2}” c. “{0:C}”
b. “{C:0}” d. “{0:F,2,\$}”

REF: 106

24. If you expect to receive an “A” in this course, which of the following declarations would be most appropriate for storing the grade?

- a. char letterGrade;
b. string grade;
c. int letterGrade;
d. double letterGrade;

REF: 91

25. The value $3.42\text{e-}4$ is equivalent to _____.

- a. 3420000 c. -3.420000
b. .000342 d. -.000342

REF: 85

26. Following standard conventions used by many programmers, the identifier REBATE would be defined as a(n) _____.

- a. class c. namespace
b. object d. constant

REF: 89

27. A computer that has 8 GB of RAM can store approximately eight ____ characters.

- a. million
- b. trillion
- c. gillion
- d. billion

ANS: D PTS: 1 REF: 70

28. The decimal equivalent of 00011111 is ____.

- a. 5
- b. 10
- c. 31
- d. 32

ANS: C PTS: 1 REF: 67

29. The binary equivalent of 24 is ____.

- a. 00000011
- b. 11000000
- c. 00011000
- d. 00001111

ANS: C PTS: 1 REF: 67

30. The Hexadecimal numbering system uses all of the following symbols EXCEPT ____.

- a. 0
- b. A
- c. F
- d. H

ANS: D PTS: 1 REF: 68

COMPLETION

1. One of the rules for creating a(n) _____ is to use a combination of alphabetic characters, numeric digits and the underscore character.

ANS: identifier

PTS: 1 REF: 71

2. _____ are predefined reserved identifiers that have special meanings to the compiler.

ANS: Keywords

PTS: 1 REF: 71

3. Every time you declare a variable in the C# language, you are actually _____ a class.

ANS: instantiating

PTS: 1 REF: 76

4. The _____ data type is a whole number, between a certain range of values, and contains no decimal point.

ANS: int

PTS: 1 REF: 77

5. The _____ data type was added to the language to eliminate the problems of loss of precision in mathematical operations that occurred in previous languages.

ANS: decimal

PTS: 1 REF: 81

6. When you add the keyword _____ to a declaration, it becomes a constant.

ANS: const

PTS: 1 REF: 88

7. The _____ is sometimes referred to as the remainder operator.

ANS: modulus operator (%)

PTS: 1 REF: 93

8. _____ operators provide a shortcut way to write assignment statements using the result as part of the computation.

ANS: Compound

PTS: 1 REF: 98

9. The C# category of _____ operators appear at the top of the precedence table with the order of operations.

ANS: unary

PTS: 1 REF: 100

10. _____ makes a variable temporarily behave as if it is a different type.

ANS: Casting

PTS: 1 REF: 104

11. In order to place a value in memory that cannot be changed, you add the keyword _____ to the declaration.

ANS: const

PTS: 1 REF: 88

12. The @ symbol in the following string, @ "C:\MyProjects", is called a(n) _____ character.

ANS: verbatim

PTS: 1 REF: 91

13. A megabyte is approximately a(n) _____ bytes.

ANS: million

PTS: 1 REF: 70

14. _____ is the universal character-encoding schema that provides a unique number for every character in many different languages.

ANS: Unicode

PTS: 1 REF: 69

15. A(n) _____ represents an area in the computer memory where a value of a particular data type can be stored. When you declare a(n) _____, you allocate memory for that data item in your program.

ANS: variable

PTS: 1 REF: 75