

1. What type would you choose for the following “numbers”?
 - A person’s telephone number
 - string
 - A person’s height
 - float
 - A person’s age
 - int
 - A person’s gender (Male, Female, Prefer Not To Answer)
 - char
 - A person’s salary
 - double
 - A book’s ISBN
 - long
 - A book’s price
 - double
 - A book’s shipping weight
 - float
 - A country’s population
 - long
 - The number of stars in the universe
 - long
 - The number of employees in each of the small or medium businesses in the United Kingdom (up to about 50,000 employees per business)
 - int
2. What is the difference between value type and reference type variables? What is boxing and unboxing?
 - a. Value type stores the data of the value, and the reference type stores the references(address) of the data
 - b. Boxing transfers the value type to reference type, and unboxing transfers the reference type to value type
3. What is meant by the terms managed resource and unmanaged resource in .NET
 - a. Managed resource means anything that managed by the CLR, and unmanaged resource are those resource that not managed by the CLR
4. What is the purpose of Garbage Collector in .NET?
 - a. Remove the unwanted resource and save space for system.

1. What happens when you divide an int variable by 0?
 - a. It will cause an error called "Division by constant zero (CS0020)"
2. What happens when you divide a double variable by 0?
 - a. The output will be " ∞ "
3. What happens when you overflow an int variable, that is, set it to a value beyond its range?
 - a. It will cause an error called "cannot implicitly convert long to int"
4. What is the difference between `x = y++`; and `x = ++y`;
 - a. x equals to y, and y plus one
 - b. y plus one, and x equals to one
5. What is the difference between break, continue, and return when used inside a loop statement?
 - a. Break and return will stop the loop, but break will continue to run code below the loop and return will stop running
 - b. Continue will stop the current iteration and jump to next iteration
6. What are the three parts of a for statement and which of them are required?
 - a. First is initiation of a value
 - b. Set a condition to stop the loop
 - c. The increment/decrement for the value after each iteration

B is required.