1.

You are developing an application that includes a class named Order. The application will store a collection of Order objects.
The collection must meet the following requirements:
-> Use strongly typed members.
-> Process Order objects in first-in-first-out order.
-> Store values for each Order object.
-> Use zero-based indices.
You need to use a collection type that meets the requirements.
Which collection type should you use?

A. Queue<T>
B. SortedList
C. LinkedList<T>
D. HashTable
E. Array<T>

2.

You are developing an application. The application calls a method that returns an array of integers named employeeIds. You define an integer variable named employeeIdToRemove and assign a value to it. You declare an array named filteredEmployeeIds.
You have the following requirements:
-> Remove duplicate integers from the employeeIds array.
Sort the array in order from the highest value to the lowest value.

.

-> Remove the integer value stored in the employeeIdToRemove variable from the employeeIds array.
You need to create a LINQ query to meet the requirements.
Which code segment should you use?

A.
```
int[] filteredEmployeeIds = employeeIds.Where(value => value !=
  employeeIdToRemove).OrderBy(x => x).ToArray();
```

B.
```
int[] filteredEmployeeIds = employeeIds.Where(value => value !=
  employeeIdToRemove).OrderByDescending(x => x).ToArray();
```

C.
```
int[] filteredEmployeeIds = employeeIds.Distinct().Where(value => value !=
  employeeIdToRemove).OrderByDescending(x => x).ToArray();
```

D.
```
int[] filteredEmployeeIds = employeeIds.Distinct().OrderByDescending(x => x).ToArray();
```

A. Option A
B. Option B
C. Option C
D. Option D

3.

You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 class Animal
02 {
03   public string Color { get; set; }
04   public string Name { get; set; }
05 }
06 private static IEnumerable<Animal> GetAnimals(string sqlConnectionString)
07 {
08   var animals = new List<Animal>();
09   SqlConnection sqlConnection = new SqlConnection(sqlConnectionString);
10   using (sqlConnection)
11   {
12     SqlCommand sqlCommand = new SqlCommand("SELECT Name, ColorName FROM Animals", sqlConnection);
13
14     using (SqlDataReader sqlDataReader = sqlCommand.ExecuteReader())
15     {
16
17       {
18         var animal = new Animal();
19         animal.Name = (string)sqlDataReader["Name"];
20         animal.Color = (string)sqlDataReader["ColorName"];
21         animals.Add(animal);
22       }
23     }
24   }
25   return animals ;
26 }
```

The GetAnimals() method must meet the following requirements:
-> Connect to a Microsoft SQL Server database.
-> Create Animal objects and populate them with data from the database.
-> Return a sequence of populated Animal objects.
You need to meet the requirements.
Which two actions should you perform? Each correct answer presents part of the solution.
NOTE: Each correct selection is worth one point.

A. Insert the following code segment at line 16: while(sqlDataReader.NextResult())
B. Insert the following code segment at line 13: sqlConnection.Open();
C. Insert the following code segment at line 13: sqlConnection.BeginTransaction();
D. Insert the following code segment at line 16: while(sqlDataReader.Read())
E. Insert the following code segment at line 16: while(sqlDataReader.GetValues())

4.

You are developing an application that uses the Microsoft ADO.NET Entity Framework to retrieve order information from a Microsoft SQL Server database. The application includes the following code. (Line numbers are included for reference only.)

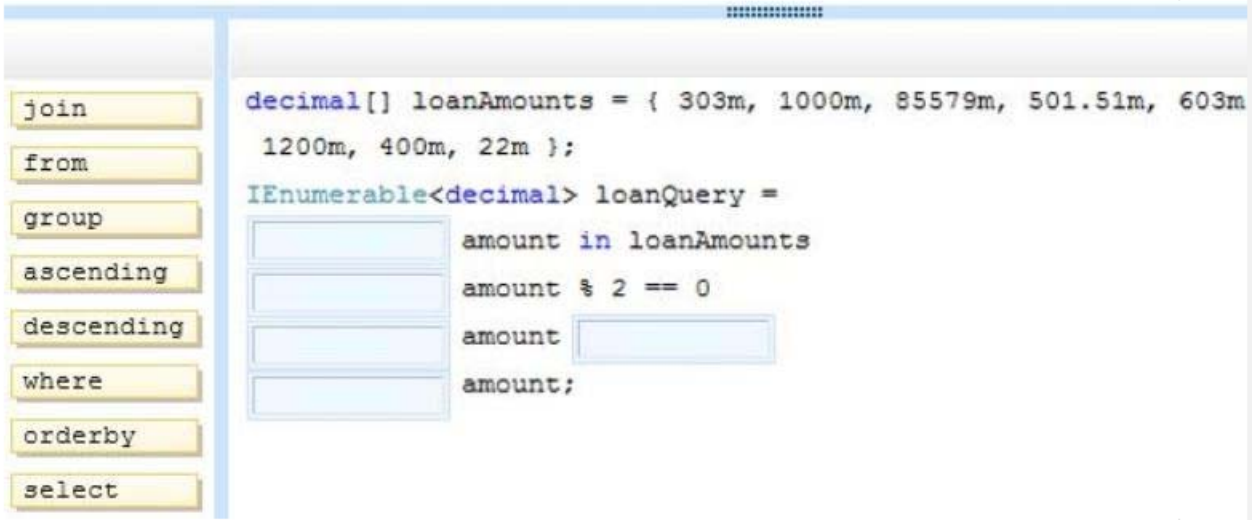
```
01 public DateTime? OrderDate;
02 IQueryable<Order> LookupOrdersForYear(int year)
03 {
04   using (var context = new NorthwindEntities())
05   {
06     var orders =
07      from order in context.Orders
08
09       select order;
10     return orders.ToList().AsQueryable();
11   }
12 }
```

The application must meet the following requirements:
-> Return only orders that have an OrderDate value other than null.
-> Return only orders that were placed in the year specified in the OrderDate property or in a later year.
You need to ensure that the application meets the requirements.
Which code segment should you insert at line 08?

A. Where order.OrderDate.Value != null && order.OrderDate.Value.Year >= year
B. Where order.OrderDate.Value == null && order.OrderDate.Value.Year == year
C. Where order.OrderDate.HasValue && order.OrderDate.Value.Year == year
D. Where order.OrderDate.Value.Year == year

5.

You are developing an application by using C#. The application includes an array of decimal values named loanAmounts. You are developing a LINQ query to return the values from the array.
The query must return decimal values that are evenly divisible by two. The values must be sorted from the lowest value to the highest value.
You need to ensure that the query correctly returns the decimal values.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)
Select and Place:



6.

You are developing an application. The application includes a method named ReadFile that reads data from a file.
The ReadFile() method must meet the following requirements:
-> It must not make changes to the data file.
-> It must allow other processes to access the data file.
-> It must not throw an exception if the application attempts to open a data file that does not exist.
You need to implement the ReadFile() method.
Which code segment should you use?

A. var fs = File.Open(Filename, FileMode.OpenOrCreate, FileAccess.Read,FileShare.ReadWrite);
B. var fs = File.Open(Filename, FileMode.Open, FileAccess.Read,FileShare.ReadWrite);
C. var fs = File.Open(Filename, FileMode.OpenOrCreate, FileAccess.Read,FileShare.Write);
D. var fs = File.ReadAllLines(Filename);
E. var fs = File.ReadAllBytes(Filename);

7.

An application receives JSON data in the following format:

```
{ "FirstName" : "David",
  "LastName" : "Jones",
  "Values" : [0, 1, 2] }
```

The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public class Name
02 {
03  public int [] Values {get; set; }
04  public string FirstName {get; set; }
05  public string LastName {get; set; }
06 }
07 public static Name ConvertToName (string json)
08 }
09  var ser = new JavaScriptSerializer();
10
11 }
```

You need to ensure that the ConvertToName() method returns the JSON input string as a Name object.
Which code segment should you insert at line 10?

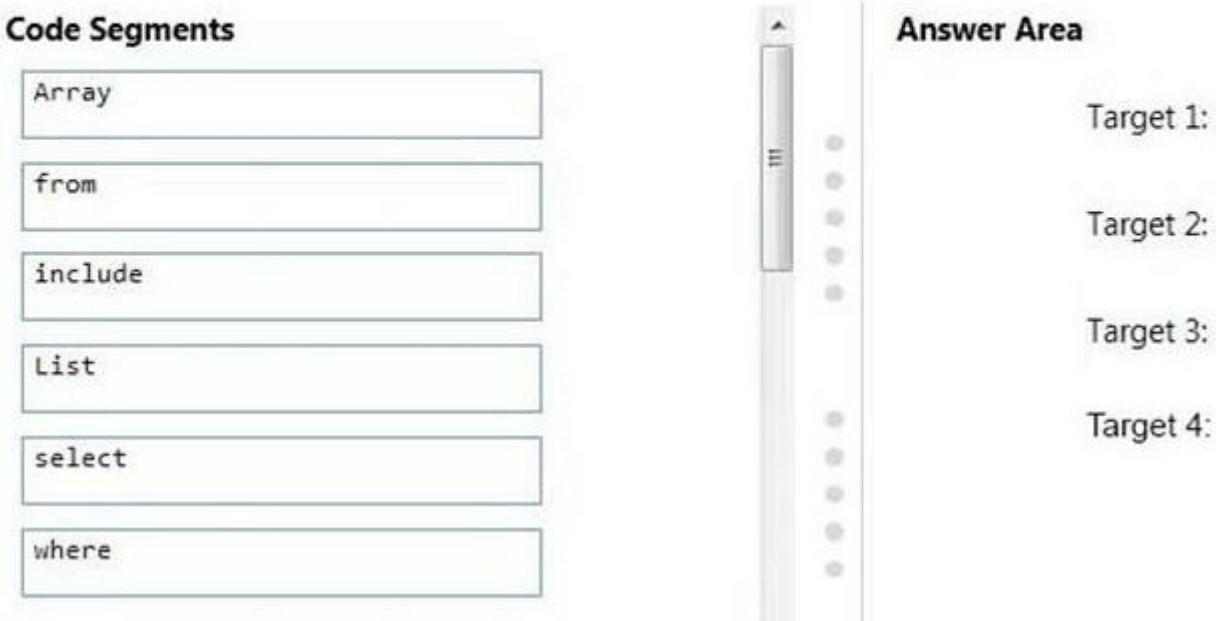
A. Return ser.ConvertToType<Name>(json);
B. Return ser.DeserializeObject(json);
C. Return ser.Deserialize<Name>(json);
D. Return (Name)ser.Serialize(json);

8.

You have the following code:

```
string[] vehicles = { "Airplane", "Boat", "Car" };
  Target 1<string> aVehicles =
  (Target 2 vehicle in vehicles
  Target 3 vehicle.StartsWith("A")
  Target 4 vehicle).ToList<string>();
    foreach (var vehicle in aVehicles)
    {
      Console.WriteLine(vehicle);
    }
```

You need to display all of the vehicles that start with the letter â€œAâ€.
How should you complete the code? To answer, drag the appropriate code elements to the correct targets. Each code element may be used once, more than once, or not at all.
You may need to drag the split bar between panes or scroll to view content.
NOTE: Each correct selection is worth one point.
Select and Place:



9.

You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01 class Customer
02 {
03   public string CompanyName { get; set; }
04   public string Id { get; set; }
05 }
06 const string sqlSelectCustomers = "SELECT CustomerID, CompanyName FROM Customers"
07 private static IEnumerable<Customer> GetCustomers(string sqlConnectionString)
08 {
09   List<Customer> customers = new List<Customer>();
10   SqlConnection sqlConnection = new SqlConnection(sqlConnectionString);
11   using (sqlConnection)
12   {
13     SqlCommand sqlCommand = new SqlCommand(sqlSelectCustomers, sqlConnection);
14
15     using (SqlDataReader sqlDataReader = sqlCommand.ExecuteReader())
16     {
17
18       {
19         Customer customer = new Customer();
20         customer.Id = (string)sqlDataReader["CustomerID"];
21         customer.CompanyName = (string)sqlDataReader["CompanyName"];
22         customers.Add(customer);
23       }
24     }
25   }
26   return customers;
27 }
```

The GetCustomers() method must meet the following requirements:
-> Connect to a Microsoft SQL Server database.
-> Populate Customer objects with data from the database.
-> Return an IEnumerable<Customer> collection that contains the populated Customer objects.
You need to meet the requirements.
Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Insert the following code segment at line 17: while (sqlDataReader.GetValues())
B. Insert the following code segment at line 14: sqlConnection.Open();
C. Insert the following code segment at line 14: sqlConnection.BeginTransaction();
D. Insert the following code segment at line 17: while (sqlDataReader.Read())
E. Insert the following code segment at line 17: while (sqlDataReader.NextResult())

10.

The application will output the Customer class as a structured XML document by using the following code segment:

```
<?xml version="1.0" encoding="utf-8"?>
<Prospect xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema"
 ProspectId="9c027bb8-65f1-40a9-8afa-ac839f3cdc5d" xmlns="http://prospect">
  <FullName>David Jones</FullName>
  <DateOfBirth>1977-06-11T00:00:00</DateOfBirth>
</Prospect>
```

You need to ensure that the Customer class will serialize to XML.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)
Select and Place:

```
[XmlRoot("Customer", Namespace = "http://customer")]
[XmlRoot("Prospect", Namespace = "http://prospect")]
[XmlAttribute("ProspectId")]
[XmlElement("ProspectId")]
[XmlChoiceIdentifier]
[XmlIgnore]
[XmlArrayItem]
[XmlElement("FullName")]
```

```
public class Customer
{
    public Guid Id { get; set; }
    public string Name { get; set; }
    public DateTime DateOfBirth { get; set; }
    public int Tin { get; set; }
}
```

11.

You are developing an application. The application converts a Location object to a string by using a method named WriteObject.
The WriteObject() method accepts two parameters, a Location object and an XmlObjectSerializer object.
The application includes the following code. (Line numbers are included for reference only.)

```
01 public enum Compass
02 {
03   North,
04   South,
05   East,
06   West
07 }
08 [DataContract]
09 public class Location
10 {
11   [DataMember]
12   public string Label { get; set; }
13   [DataMember]
14   public Compass Direction { get; set; }
15 }
16 void DoWork()
17 {
18   var location = new Location { Label = "Test", Direction = Compass.West };
19   Console.WriteLine(WriteObject(location,
20
21   ));
22 }
```

You need to serialize the Location object as XML.
Which code segment should you insert at line 20?

A. new XmlSerializer(typeof(Location))
B. new NetDataContractSerializer()
C. new DataContractJsonSerializer(typeof (Location))
D. new DataContractSerializer(typeof(Location))

12.

You are developing an application that includes a class named Order. The application will store a collection of Order objects.
The collection must meet the following requirements:
-> Internally store a key and a value for each collection item.
-> Provide objects to iterators in ascending order based on the key.
-> Ensure that items are accessible by zero-based index or by key.
You need to use a collection type that meets the requirements.
Which collection type should you use?

A. LinkedList
B. Queue
C. Array
D. HashTable
E. SortedList

13.

You need to ensure that the application accepts only integer input and prompts the user each time non-integer input is entered.
Which code segment should you add at line 19?

A. If (!int.TryParse(sLine, out number))
B. If ((number = Int32.Parse(sLine)) == Single.NaN)
C. If ((number = int.Parse(sLine)) > Int32.MaxValue)
D. If (Int32.TryParse(sLine, out number))

14.

You are developing an application that includes the following code segment. (Line numbers are included for reference only.)

```
01      using System;
02      class MainClass
03      {
04        public static void Main(string)[] args)
05        {
06          bool bValidaInteger = false;
07          int value = 0;
08          do
09          {
10            Console.WriteLine("Enter an integer:");
11            bValidInteger = GetValidInteger(ref value);
12            } while (!bValidInteger);
13            Console.WriteLine("You entered a valid integer, " + value);
14      }
15      public static bool getValidInteger(ref int val)
16      {
17        string sLine = Console.ReadLine();
18        int number;
19
20        {
21          return false;
22        }
23        else
24        {
25          val = number;
26          return true;
27        }
28      }
29  }
```

15.

You have the following code:

```
public static void DeserializeJsonData(MemoryStream stream1)
{
DataContractJsonSerializer serializer =
new DataContractJsonSerializer(Target 1(Target 2));
CompanyInfo cn = (CompanyInfo)Target 3.ReadObject(stream1);
```

parameter into the CompanyInfo class.
How should you complete the code? To answer, drag the appropriate code elements to the correct targets.
Each code element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.
NOTE: Each correct selection is worth one point.
Select and Place:

Code Segments

- CompanyInfo
- Encoding.UTF8.GetBytes
- JSONObject
- ReadObject
- serializer
- typeof

Answer Area

Target 1: [ ]

Target 2: [ ]

Target 3: [ ]

16.

You are developing an application. The application calls a method that returns an array of integers named customerIds.
You define an integer variable named customerIdToRemove and assign a value to it. You declare an array named filteredCustomerIds.
You have the following requirements.
-> Remove duplicate integers from the customerIds array.
-> Sort the array in order from the highest value to the lowest value.
-> Remove the integer value stored in the customerIdToRemove variable from the customerIds array.
You need to create a LINQ query to meet the requirements.
Which code segment should you use?

A.
```
int[] filteredCustomerIds = customerIds.Distinct().OrderByDescending(x => x).ToArray();
```

B.
```
int[] filteredCustomerIds = customerIds.Where(value => value !=
  customerIdToRemove).OrderByDescending(x => x).ToArray();
```

C.
```
int[] filteredCustomerIds = customerIds.Distinct().Where(value => value !=
  customerIdToRemove).OrderByDescending(x => x).ToArray();
```

D.
```
int[] filteredCustomerIds = customerIds.Where(value => value !=
  customerIdToRemove).OrderBy(x => x).ToArray();
```

A. Option A
B. Option B
C. Option C
D. Option D

17.

You have the following code:

```
private static Dictionary<string, int> CreateTestData()
{
    Dictionary<string, int> dict = new Dictionary<string, int>()
    {
        {"Accounting", 1},
        {"Marketing",  2},
        {"Operations", 3}
    };
    return dict;
}
private static bool? FindInList(string searchTerm)
{
    Dictionary<string, int> data = CreateTestData();

    if (data.ContainsKey(searchTerm))
    {
        return true;
    }
    else
    {
        return false;
    }

}
```

To answer, complete each statement according to the information presented in the code.
Hot Area:

If the search term is set to "Finance", the result will be ...

- false
- true
- null

If the search term is set to "1", the result will be ...

- false
- true
- null

If the search term is set to "Operations", the result will be ...

- false
- true
- null

18.

You have the following code:

```
[DataContract(Name="Indvidual")]
  public class Individual
  {
    private string m_FirstName;
    private string m_LastName;

    [DataMember]
    public string FirstName
    {
      get { return m_FirstName; }
      set { m_FirstName = value; }
    }

    [DataMember(EmitDefaultValue=false)]
    public string LastName
    {
      get { return m_LastName; }
      set { m_LastName = value; }
    }


    public Individual()
    {
    }

   public Individual(string firstName, string lastName)
   {
     m_FirstName = firstName;
     m_LastName = lastName;
   }

 }
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point
Hot Area:

	Yes	No
LastName will be serialized after firstName.	○	○
The namespace used in the serialized XML will be Individual.	○	○
The lastName node will always appear in the serialized XML.	○	○

19.

You have the following code (line numbers are included for reference only):

```
01class Bar
02{
03  pub lic string barColor { get; set; }
04  public string barName { get; set; }
05  private static IEnumerable<Bar> GetBars(string sqlConnectionString)
06  {
07    var bars = new List<Bar>();
08    SqlConnection fooSqlConn = new SqlConnection();
09    using (fooSqlConn)
10    {
11      SqlCommand fooSqlCmd = new SqlCommand
        ("Select sqlName,sqlColor from Animals", fooSqlConn);
12      fooSqlConn.Open();
13      using (SqlDataReader fooSqlReader = fooSqlCmd.ExecuteReader())
14      {
15
16        {
17          var bar = new Bar();
18          bar.barName = (String)fooSqlReader["sqlName"];
19          bar.barColor = (String)fooSqlReader["sqlColor"];
20          bars.Add(bar);
21        }
22      }
23    }
24    return bars;
25  }
26}
```

You need to identify the missing line of code at line 15. Which line of code should you identify?

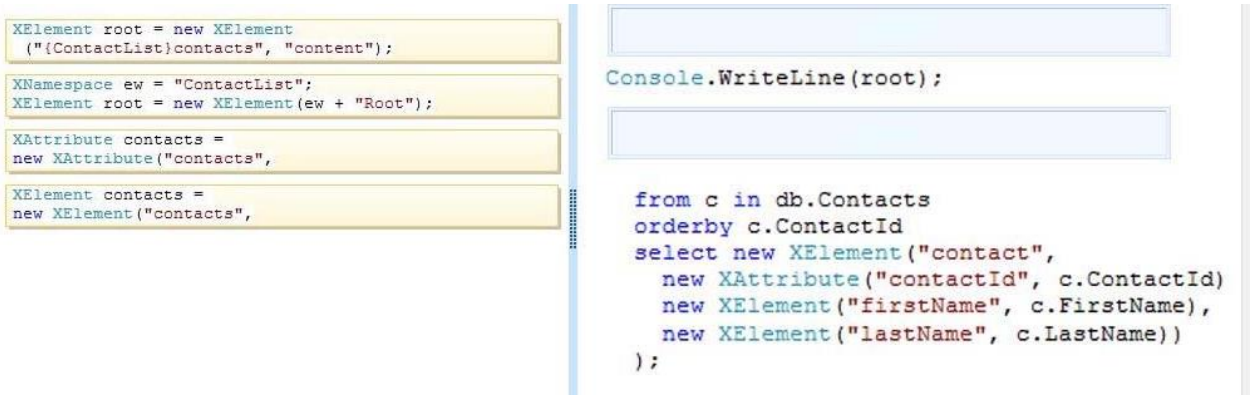
A. using (fooSqlConn.BeginTransaction())
B. while (fooSqlReader.Read())
C. while (fooSqlReader.NextResult())
D. while (fooSqlReader.GetBoolean(0))

20.

You are developing an application that will populate an extensive XML tree from a Microsoft SQL Server 2008 R2 database table named Contacts.
You are creating the XML tree. The solution must meet the following requirements:
-> Minimize memory requirements.
Maximize data processing speed.

▪

You open the database connection. You need to create the XML tree.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)
Select and Place:



21.

You need to write a method that retrieves data from a Microsoft Access 2013 database.
The method must meet the following requirements:
-> It must be read-only.
-> You must be able to use the data before the entire data set is retrieved.
-> You must minimize the amount of system overhead and the amount of memory usage.
Which type of object should you use in the method?

A. SqlDataAdapter
B. DataContext
C. DbDataAdapter
D. OleDbDataReader

22.

```
List<Int32> items = new List<int>() {
  100,
  95,
  80,
  75,
  95
};
```

You need to retrieve all of the numbers from the items variable that are greater than 80.
Which code should you use?

A.
```
var result = from i in items
  where i > 80
  select i;
```

B.
```
var result = items.Take(80);
```

C.
```
var result = items.First(i => i > 80);
```

D.
```
var result = items.Any(i => i > 80);
```

23.

You are creating a method that will split a single input file into two smaller output files.
The method must perform the following actions:
-> Create a file named header.dat that contains the first 20 bytes of the input file.
-> Create a file named body.dat that contains the remainder of the input file.
You need to create the method.
How should you complete the relevant code? (To answer, drag the appropriate code segments to the correct locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)
Select and Place:

```
fsSource.Seek(20, SeekOrigin.Current);
byte[] body = new byte[fsSource.Length];
byte[] body = new byte[fsSource.Length - 20];
fsHeader.Write(header, 0, header.Length);
fsHeader.Write(header, 20, header.Length);
fsBody.Write(body, 0, body.Length);
fsBody.Write(body, 20, body.Length);
```

```
using (FileStream fsSource = File.OpenRead(SourceFilePath))
using (FileStream fsHeader = File.OpenWrite(HeaderFilePath)
using (FileStream fsBody = File.OpenWrite(BodyFilePath))
{
  byte[] header = new byte[20];
  [                                   ]
  fsSource.Read(header, 0, header.Length);
  [                                   ]
  fsSource.Read(body, 0, body.Length);
  [                                   ]
}
```

24.

You are developing an application that will read data from a text file and display the file contents.
You need to read data from the file, display it, and correctly release the file resources.
Which code segment should you use?

```
string inputLine;
using (StreamReader reader = new StreamReader("data.txt"))
{
  while ((inputLine = reader.ReadLine()) != null)
  {
    Console.WriteLine(inputLine);
  }
}
```

A.

```
string inputLine;
StreamReader reader = null;
using (reader = new StreamReader("data.txt")) ;
while ((inputLine = reader.ReadLine()) != null)
{
  Console.WriteLine(inputLine);
}
```

B.

```
string inputLine;
StreamReader reader = new StreamReader("data.txt");
while ((inputLine = reader.ReadLine()) != null)
{
  Console.WriteLine(inputLine);
}
```

C.

```
string inputLine;
StreamReader reader = null;
try
{
  reader = new StreamReader("data.txt");
  while ((inputLine = reader.ReadLine()) != null)
  {
    Console.WriteLine(inputLine);
  }
  reader.Close();
  reader.Dispose();
}
finally
{
}
```

D.

25..

You have the following code (line numbers are included for reference only):

```
01 DataTable dataTable;
02 string connString = "Data Source=192.168.1.100;Initial Catalog=Database1;User Id=sa;Password=p@ssw0rd";
03 using (SqlConnection sqlConn = new SqlConnection(connString))
04 {
05   sqlConn.Open();
06   using (SqlCommand sqlCmd = new SqlCommand())
07   {
08     sqlCmd.Connection = sqlConn;
09     sqlCmd.CommandType = CommandType.StoredProcedure;
10     sqlCmd.CommandText = "p_Procedure1";
11     using (SqlDataAdapter adapter = new SqlDataAdapter(sqlCmd))
12     {
13       using (dataTable = new DataTable())
14       {
15         adapter.Fill(dataTable);
16       }
17     }
18   }
19 }
```

To answer, complete each statement according to the information presented in the code.
Hot Area:

The database connection gets closed at line... [▼]
- 15
- 16
- 17
- 18
- 19

The adapter object gets disposed at line.. [▼]
- 15
- 16
- 17
- 18
- 19

26.

You need to store the values in a collection.
The solution must meet the following requirements:
-> The values must be stored in the order that they were added to the collection.
-> The values must be accessed in a first-in, first-out order.
Which type of collection should you use?

A. SortedList
B. Queue
C. ArrayList
D. Hashtable

27.

You are developing an application that retrieves patient data from a web service.
The application stores the JSON messages returned from the web service in a string variable named PatientAsJson.
The variable is encoded as UTF-8. The application includes a class named Patient that is defined by the following code:

```
public class Patient
{
  public bool IsActive { get; set; }
  public string Name { get; set; }
  public int Id { get; set; }
}
```

You need to populate the Patient class with the data returned from the web service.

You need to populate the Patient class with the data returned from the web service.

Which code segment should you use?

```
DataContractJsonSerializer jsSerializer = new DataContractJsonSerializer(typeof(Patient));
using (MemoryStream stream = new MemoryStream(Encoding.UTF8.GetBytes(PatientAsJson)))
{
  Patient patientFromJson = (Patient)jsSerializer.ReadObject(stream);
}
```

A.

```
XmlSerializer xmlSerializer = new XmlSerializer(typeof(Patient));
using (MemoryStream stream = new MemoryStream(Encoding.UTF8.GetBytes(PatientAsJson)))
{
  Patient patientFromJson = (Patient)xmlSerializer.Deserialize(stream);
}
```

B.

```
DataContractJsonSerializer jsSerializer = new DataContractJsonSerializer(typeof(Patient));
using (MemoryStream stream = new MemoryStream(Encoding.UTF8.GetBytes(PatientAsJson)))
{
  Patient patientFromJson = new Patient();
  jsSerializer.WriteObject(stream, patientFromJson);
}
```

C.

```
IFormatter formatter = new BinaryFormatter();
Stream stream = new FileStream(PatientAsJson, FileMode.Open, FileAccess.Read, FileShare.Read);
Patient patientFromJson = (Patient)formatter.Deserialize(stream);
stream.Close();
```

D.

28.

You are modifying an existing banking application.
The application includes an Account class and a Customer class. The following code segment defines the classes.

```
class Account
{
  public Account(decimal balance, int term, decimal rate)
  {
    Term = term;
    Balance = balance;
    Rate = rate;
  }
  public decimal Balance { get; set; }
  public decimal Rate { get; set; }
  public int Term { get; set; }
}

class Customer
{
  public Customer(string firstName, string lastName, Collection<Account> accounts)
  {
    FirstName = firstName;
    LastName = lastName;
    AccountCollection = accounts;
  }
  public string FirstName { get; set; }
  public string LastName { get; set; }
  public Collection<Account> AccountCollection { get; set; }
}
```

You populate a collection named customerCollection with Customer and Account objects by using the following code segment:

```
Collection<Customer> customerCollection = new Collection<Customer>();
Collection<Account> customerAccounts = new Collection<Account>();
customerAccounts.Add(new Account(1000m, 2, 0.025m));
customerAccounts.Add(new Account(3000m, 4, 0.045m));
customerAccounts.Add(new Account(5000m, 6, 0.045m));
customerCollection.Add(new Customer("David", "Jones", customerAccounts));
```

You create a largeCustomerAccounts collection to store the Account objects by using the following code segment:

Collection<Account> largeCustomerAccounts = new Collection<Account> ();

All accounts with a Balance value greater than or equal to 1,000,000 must be tracked.

You need to populate the largeCustomerAccounts collection with Account objects.

Which code segment should you use?

A.
```
foreach (Customer customer in customerCollection)
{
  foreach (Account account in customer.AccountCollection)
  {
    if (account.Balance >= 1000000m)
    {
      customer.AccountCollection.Add(account);
    }
  }
}
```

B.
```
foreach (Account customer in customerCollection)
{
  foreach (Account account in largeCustomerAccounts)
  {
    if (account.Balance >= 1000000m)
    {
      largeCustomerAccounts.Add(account);
    }
  }
}
```

C.
```
foreach (Customer customer in customerCollection)
{
  foreach (Account account in customer.AccountCollection)
  {
    if (account.Balance >= 1000000m)
    {
      largeCustomerAccounts.Add(account);
    }
  }
}
```

29.

You define a class by using the following code:

```
public class Department
{
  public int Id { get; set; }
  public string Name { get; set; }
  public string Manager { get; set; }
  public int BuildingId { get; set; }
}
```

You create a collection by using the following code:

```
Department[] departments =
{
  new Department
   { Id = 1, Name = "Accounting", Manager = "User1", BuildingId = 15 },
  new Department
   { Id = 2, Name = "Sales", Manager = "User2", BuildingId = 3 },
  new Department
   { Id = 3, Name = "IT", Manager = "User3" , BuildingId = 15},
  new Department
   { Id = 4, Name = "Marketing", Manager = "User4", BuildingId = 3}
};
var output =
  from d in departments
  group d by d.BuildingId into dp
  select new { sorted = dp.Key, Department = dp };
```

To answer, complete each statement according to the information presented in the code.
Hot Area:

The output collection will contain ... object(s).

- 0
- 1
- 2
- 3
- 4

The sorted property of the output collection will be the ... type.

- byte
- int
- string
- var

30.

You are troubleshooting an application that uses a class named FullName. The class is decorated with the DataContractAttribute attribute. The application includes the following code. (Line numbers are included for reference only.)

```
01 class Program
02 {
03   MemoryStream WriteName(Name name)
04   {
05     var ms = new MemoryStream();
06     var binary = XmlDictionaryWriter.CreateBinaryWriter(ms);
07     var ser = new DataContractSerializer(typeof(FullName));
08     ser.WriteObject(binary, name);
09
10     return ms;
11   }
12 }
```

You need to ensure that the entire FullName object is serialized to the memory stream object.
Which code segment should you insert at line 09?

A. binary.WriteEndDocument();
B. binary.WriteEndDocumentAsync();
C. binary.WriteEndElementAsync();
D. binary.Flush();
E. binary.WriteEndElement();
F. ms.Close();
G. ms.Flush();

31.

You are developing an application that includes a class named Employee and a generic list of employees. The following code segment declares the list of employees:
List<Employee> employeesList = new List<Employee>();
You populate the employeesList object with several hundred Employee objects.
The application must display the data for five Employee objects at a time.
You need to create a method that will return the correct number of Employee objects.
Which code segment should you use?

A.
```
public static IEnumerable<int> Page(IEnumerable<int> source, int page, int pageSize)
{
  return source.Take((pageSize - 1) * page).Skip(pageSize);
}
```

B.
```
public static IEnumerable<TSource> Page<TSource>(this IEnumerable<TSource> source, int page, int pageSize)
{
  return source.Skip((page - 1) * pageSize).Take(pageSize);
}
```

C.
```
public static IEnumerable<int> Page(IEnumerable<int> source, int page, int pageSize)
{
  return source.Skip((pageSize - 1) * page).Take(pageSize);
}
```

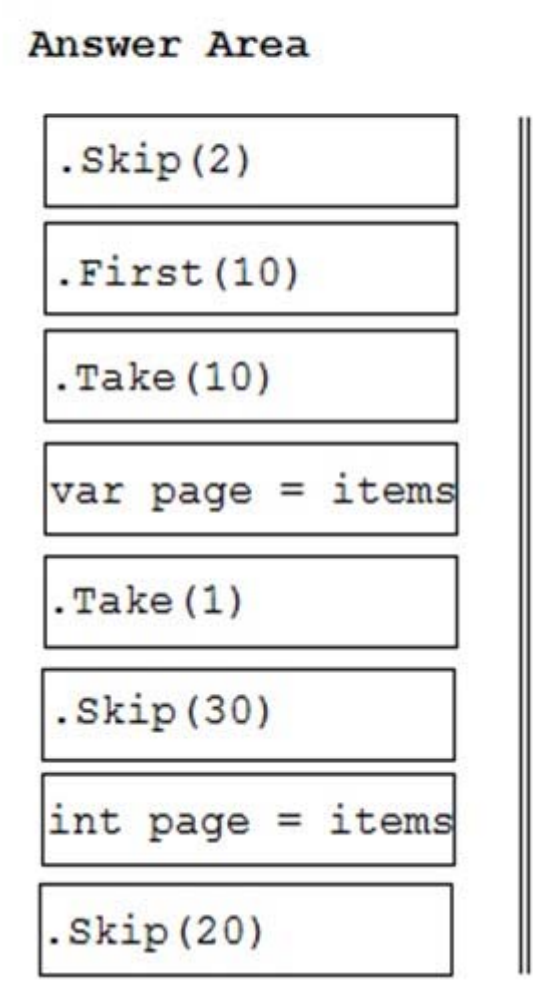
D.
```
public static IEnumerable<TSource> Page<TSource>(this IEnumerable<TSource> source, int page, int pageSize)
{
  return source.Take((page - 1) * pageSize).Skip(pageSize);
}
```

32.

You have an application that accesses a Microsoft SQL Server database.
The database contains a stored procedure named Proc1. Proc1 accesses several rows of data across multiple tables.
You need to ensure that after Proc1 executes, the database is left in a consistent state.
While Proc1 executes, no other operation can modify data already read or changed by Proc1. (Develop the solution by selecting and ordering the required code snippets.
You may not need all of the code snippets.)
Select and Place:

33.

You have an application that uses paging. Each page displays 10 items from a list.
You need to display the third page. (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)
Select and Place:



34.

You have an application that accesses a Web server named Server1.

[1]

Which code should you use?

A.
```
WebRequest request = HttpWebRequest.Create("http://server1/image1.jpg");
StreamWriter writer = new StreamWriter(request.GetResponse().GetResponseStream());
writer.WriteLine("C:\\file1.jpg");
writer.Dispose();
```

B.
```
WebClient client = new WebClient();
StreamWriter writer = new StreamWriter("C:\\file1.jpg");
writer.Write(client.DownloadData("http://server1/image1.jpg"));
writer.Dispose();
client.Dispose();
```

C.
```
WebClient client = new WebClient();
client.DownloadFile("http://server1/image1.jpg", "C:\\file1.jpg");
client.Dispose();
```

D.
```
WebRequest request = HttpWebRequest.Create("http://server1/image1.jpg");
StreamWriter writer = new StreamWriter(request.GetResponse().GetResponseStream());
writer.Write("C:\\file1.jpg");
writer.Dispose();
```

35.

You have an existing order processing system that accepts .xml files.
The following code shows an example of a properly formatted order in XML:

```
<Order OrderID="42">
  <Customer>Ben Smith</Customer>
  <CustomerID>206</CustomerID>
  <OrderDate>2013-04-19T09:13:14.7265994-05:00</OrderDate>
</Order>
```

You create the following class that will be serialized:

```
[DataContract()]
public class Order
{
  [DataMember()]
  public Int32 OrderID { get; set; }

  [DataMember(Name = "Customer")]
  public String CustomerName { get; set; }

  [DataMember()]
  private Int32 CustomerID { get; set; }

  public DateTime OrderDate { get; set; }
}
```

For each of the following properties, select Yes if the property is serialized according to the defined schema. Otherwise, select No.
Hot Area:

	Yes	No
OrderID	○	○
OrderDate	○	○
CustomerName	○	○

36.

You are developing an application that includes the following code segment:

```
interface IFile
{
  void Open();
}
interface IDbConnection
{
  void Open();
}
```

You need to implement the Open() method of each interface in a derived class named UseResources and call the Open() method of each interface.
Which two code segments should you use? Each correct answer presents a complete solution.
NOTE: Each correct selection is worth one point.

A.
```
class UseResources : IFile, IDbConnection
{
  void IFile.Open()
  {
    ...
  }
  void IDbConnection.Open()
  {
    ...
  }
}
```

B.
```
var manager = new UseResources ();
manager.Open();
```

C.
```
var manager = new UseResources ();
((IFile)manager).Open();
((IDbConnection)manager).Open();
```

D.
```
class UseResources : IFile, IDbConnection
{
  public void IFile.Open()
  {
    ...
  }
  public void IDbConnection.Open()
  {
    ...
  }
}
```

37.

You have the following code (line numbers are included for reference only):

```
01 using (StreamWriter writer = new StreamWriter(@"C:\console.txt"))
02 {
03   Console.SetOut(writer);
04   using (FileStream stream = new FileStream(@"C:\file.txt", FileMode.Open))
05   {
06     using (StreamReader reader = new StreamReader(stream))
07     {
08       while (!reader.EndOfStream) Console.WriteLine(reader.ReadLine());
09     }
010   }
011 }
```

To answer, complete each statement according to the information presented in the code.
Hot Area:

If File.txt does NOT exist in the root of C:, ... will be thrown.

- ArgumentNullException
- FileLoadException
- FileNotFoundException
- PipeException

The final output of the streaming operation will be ...

- a console window.
- the Console.txt file.
- the file.txt file.
- the Visual Studio Debug console.

38.

You are developing an application that will manage the inventory of a warehouse. The application includes a method named FindItem.
Users must be able to locate item records by using the item identifier, item name, or a combination of the two values.
You need to implement the FindItem() method to meet the requirement.
Which two sets of method signatures can you use to achieve this goal? Each correct answer presents a complete solution.
NOTE: Each correct selection is worth one point

```
public static Item FindItem(int id)
public static Item FindItem(string name)
public static Item FindItem(Int32 id)
```

A.

```
public static Item FindItem(int id)
public static Item FindItem(string name)
public static Item FindItem(int? id)
```

B.

```
public static Item FindItem(int id)
public static Item FindItem(string name)
public static Item FindItem(int id, String name)
```

C.

```
public static Item FindItem(int id)
public static Item FindItem(string name)
public static void FindItem(int id)
```

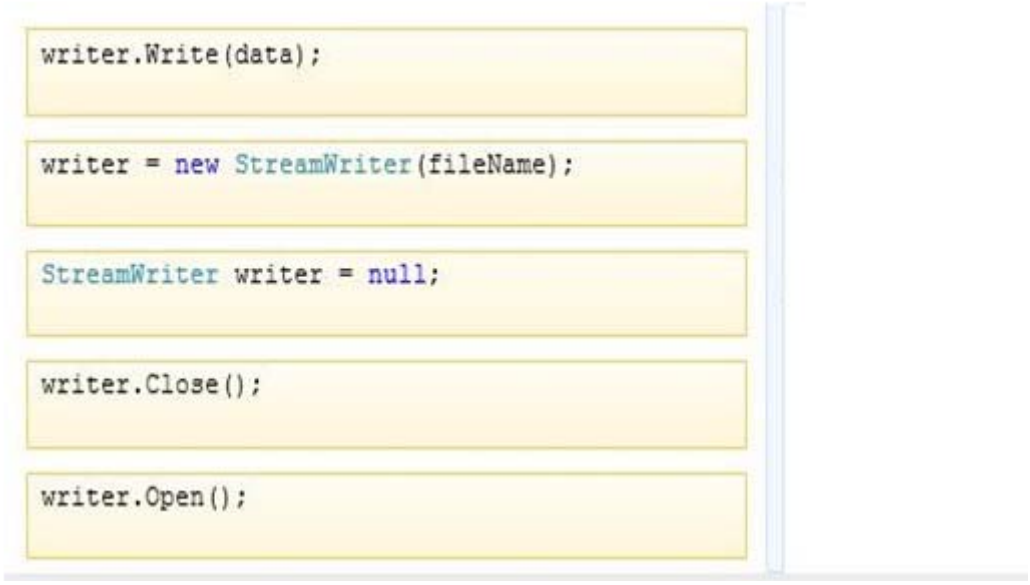
D.

39.

You are developing an application that will write data to a file. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 protected void WriteData(string filename, string data)
02 {
03
04 }
```

You need to ensure that the WriteData() method will write data to a file.
Which four code segments should you insert in sequence at line 03? To answer, move the appropriate code segments from the list of code segments to the answer area and arrange them in the correct order.
Select and Place:



40.

You are creating a console application named App1.
App1 retrieves data from the Internet by using JavaScript Object Notation (JSON).
You are developing the following code segment (line numbers are included for reference only):

```
01 public bool ValidateJson(string json, Dictionary<string, object> result)
02 {
03
04   try
05   {
06     result = serializer.Deserialize<Dictionary<string, object>>(json);
07     return true;
08   }
09   catch
10   {
11     return false;
12   }
13 }
```

You need to ensure that the code validates the JSON string.
Which code should you insert at line 03?

A. `var serializer = new DataContractSerializer();`

B. `DataContractSerializer serializer = new DataContractSerializer();`

C. `var serializer = new XmlSerializer();`

D. `var serializer = new JavaScriptSerializer();`

41.

You are developing an application that contains a class named TheaterCustomer and a method named ProcessTheaterCustomer. The method accepts a TheaterCustomer object as the input parameter.
ProcessTheaterCustomer()
You have the following requirements:
-> Store the TheaterCustomer objects in a collection.
-> Ensure that the ProcessTheaterCustomer() method processes the TheaterCustomer objects in the order in which they are placed into the collection.
You need to meet the requirements.
What should you do?

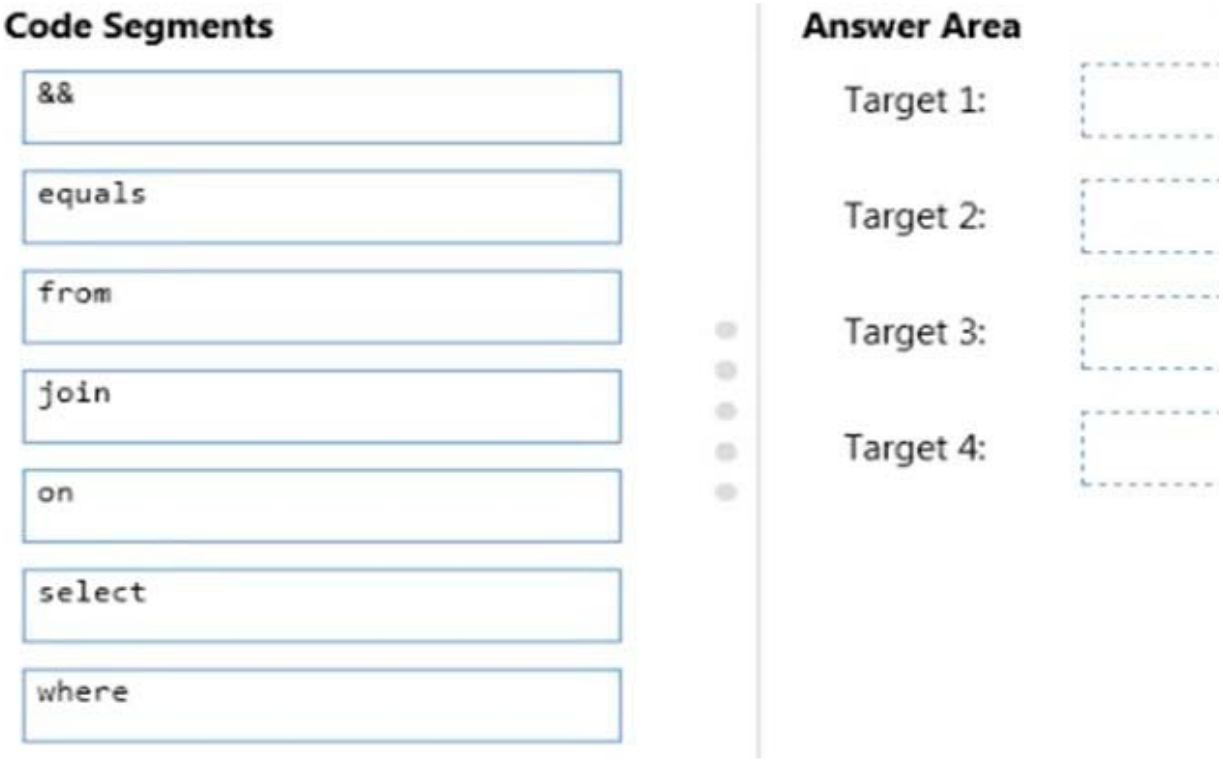
A. Create a System.Collections.Stack collection. Use the Push() method to add TheaterCustomer objects to the collection. Use the Peek() method to pass the objects to the ProcessTheaterCustomer() method.
B. Create a System.Collections.Queue collection. Use the Enqueue() method to add TheaterCustomer objects to the collection. Use the Dequeue() method to pass the objects to the ProcessTheaterCustomer() method.
C. Create a System.Collections.SortedList collection. Use the Add() method to add TheaterCustomer objects to the collection. Use the Remove() method to pass the objects to the ProcessTheaterCustomer() method.
D. Create a System.Collections.ArrayList collection. Use the Insert() method to add TheaterCustomer objects to the collection. Use the Remove() method to pass the objects to the ProcessTheaterCustomer() method.

42.

You have the following code.

```
public class Product
    {
        public string Name { get; set; }
        public int CategoryID { get; set; }
    }
    public class Category
    {
        public int ID { get; set; }
        public string Name { get; set; }
    }
List<Category> categories = new List<Category>()
{
    new Category() { ID = 1, Name = "Food" },
    new Category() { ID = 2, Name = "Clothing" },
};
List<Product> products = new List<Product>()
{
    new Product() { Name = "Strawberry", CategoryID = 1 },
    new Product() { Name = "Banana", CategoryID = 1 },
    new Product() { Name = "Pants", CategoryID = 2 },
};
    var productsWithCategories =
     Target 1 product in products
     Target 2 category in categories
        Target 3 product.CategoryID Target 4 category.ID
    select new
    {
        Name = product.Name,
        Category = category.Name
    };
```

You need to return all of the products and their associated categories.
How should you complete the code? To answer, drag the appropriate code elements to the correct targets in the answer area. Each code element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.
Select and Place:



43.

You are developing a C# application. The application includes a class named Rate. The following code segment implements the Rate class:

```
public class Rate
{
    public string Category { get; set; }
    public DateTime Date { get; set; }
    public decimal Value { get; set; }
```

You define a collection of rates named rateCollection by using the following code segment:
Collection<Rate> rateCollection = new Collection<Rate>();
The application receives an XML file that contains rate information in the following format:

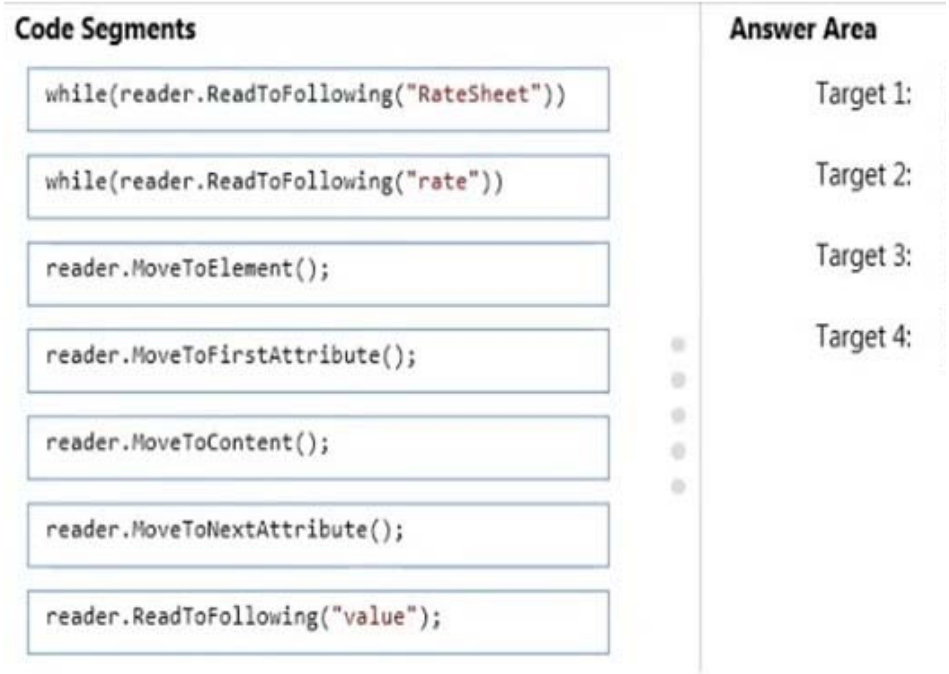
```
<?xml version="1.0" encoding="utf-8" ?>
<RateSheet>
 <rate category="buyout" date="2012-03-22">
     <value>0.0375</value>
 </rate>
 <rate category="fixed" date="2012-03-23">
     <value>0.0475</value>
 </rate>
</RateSheet>
```

You need to parse the XML file and populate the rateCollection collection with Rate objects.
You have the following code:

```
using (XmlReader reader = XmlReader.Create(new StringReader(rateXML)))
{
 Target 1
 {
     Rate rate = new Rate();
     Target 2
     rate.Category = reader.Value;
     Target 3
     DateTime rateDate;
     if (DateTime.TryParse(reader.Value, out rateDate))
     {
      rate.Date = rateDate;
     }
     Target 4
     decimal value;
     if (decimal.TryParse(reader.ReadElementContentAsString(), out value))
     {
      rate.Value = value;
     }
     rateCollection.Add(rate);
     }
}
```

Which code segments should you include in Target 1, Target 2, Target 3 and Target 4 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Select and Place:



44.

```
List<Int32> items = new List<int>() {
  100,
  95,
  80,
  75,
  95
};
```

You need to retrieve all of the numbers from the items variable that are greater than 80.
Which code should you use?

A.
```
var result = items.Skip(80);
```

B.
```
var result = items.Where(i => i > 80);
```

C.
```
var result = from i in items
  groupby i into grouped
  where grouped.Key > 80
  select i;
```

D.
```
var result = items.Take(80);
```

45.

An application serializes and deserializes XML from streams. The XML streams are in the following format:

```
<Name xmlns="http://www.contoso.com/2012/06">
  <LastName>Jones</LastName>
  <FirstName>David</FirstName>
</Name>
```

The application reads the XML streams by using a DataContractSerializer object that is declared by the following code segment:

```
var ser = new DataContractSerializer(typeof(Name));
```

You need to ensure that the application preserves the element ordering as provided in the XML stream.
You have the following code:

```
Target 1
class Name
{
  Target 2
  public string FirstName { get; set; }
  Target 3
  public string LastName { get; set; }
}
```

Which attributes should you include in Target 1, Target 2 and Target 3 to complete the code? (To answer, drag the appropriate attributes to the correct targets in the answer area. Each attribute may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)
Select and Place:

46.

You have the following code. (Line numbers are included for reference only).

```
01 public async void ProcessWrite()
02 {
03   string filePath = @"temp2.txt";
04   string text = "Hello World\r\n";
05   await WriteTextAsync(filePath, text);
06 }
07 private async Task WriteTextAsync(string filePath, string text)
08 {
09   byte[] encodedText = Encoding.Unicode.GetBytes(text);
10   using (FileStream sourceStream = new FileStream(
·   filePath, FileMode.Append, FileAccess.Write,
·   FileShare.None, bufferSize: 4096, useAsync: true))
11   {
12
13   }
14 }
```

You need to complete the WriteTextAsync method. The solution must ensure that the code is not blocked while the file is being written.
Which code should you insert at line 12?

A. `async sourceStream.Write(encodedText, 0, encodedText.Length);`

B. `async sourceStream.WriteAsync(encodedText, 0, encodedText.Length);`

C. `await sourceStream.Write(encodedText, 0, encodedText.Length);`

D. `await sourceStream.WriteAsync(encodedText, 0, encodedText.Length);`

47.

You are creating a class named Data that includes a dictionary object named _data.
You need to allow the garbage collection process to collect the references of the _data object.
You have the following code:

```
public class Data
{
  Target 1
  public Data(int count)
  {
    for (int i = 0; i < count; i++)
    {
      Target 2
    }
  }
}
```

Which code segments should you include in Target 1 and Target 2 to complete the code? To answer, drag the appropriate code segments to the correct targets.
Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.
Select and Place:

Code Segments

```
static Dictionary<int, WeakReference> _data;
```

```
static Dictionary<int, Int32> _data;
```

```
_data.Add(i, new WeakReference(new Class(i * 2), false));
```

```
_data.Add(i, (Int32)(i * 2));
```

48.

You write the following code.

```
List<Type> types = (Target 1.CurrentDomain.GetAssemblies()
.Target 2(t ⇒ t.GetTypes())
.Where(t ⇒ t.IsClass && t.Assembly == this.GetType().Target3)).ToList<Type>();
```

You need to get the list of all the types defined in the assembly that is being executed currently.
How should you complete the code? To answer, drag the appropriate code elements to the correct targets. Each code element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.
NOTE: Each correct selection is worth one point.
Select and Place:

49.