

1.

You are modifying an application that processes leases. The following code defines the Lease class. (Line numbers are included for reference only.)

```
01 public class Lease
02 {
03
04     private int _term;
05     private const int MaximumTerm = 5;
06     private const decimal Rate = 0.034m;
07     public int Term
08     {
09         get
10         {
11             return _term;
12         }
13         set
14         {
15             if (value <= MaximumTerm)
16             {
17                 _term = value;
18             }
19             else
20             {
21
22             }
23         }
24     }
25 }
26 public delegate void MaximumTermReachedHandler(object source, EventArgs e);
```

Leases are restricted to a maximum term of 5 years. The application must send a notification message if a lease request exceeds 5 years.

You need to implement the notification mechanism.

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

☐ A. Insert the following code segment at line 03:

```
public event MaximumTermReachedHandler OnMaximumTermReached;
```

☐ B. Insert the following code segment at line 21:

```
if (OnMaximumTermReached != null)
{
    OnMaximumTermReached(this, new EventArgs());
}
```

☐ C. Insert the following code segment at line 21:

```
value = MaximumTerm;
```

☐ D. Insert the following code segment at line 03:

```
public string MaximumTermReachedEvent { get; set; }
```

☐ E. Insert the following code segment at line 03:

```
private string MaximumTermReachedEvent;
```

☐ F. Insert the following code segment at line 21:

```
value = 5 ;
```

2.

You are developing an application that includes a class named `UserTracker`. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public delegate void AddUserCallback(int i);
02 public class UserTracker
03 {
04     List<User> users = new List<User>();
05     public void AddUser(string name, AddUserCallback callback)
06     {
07         users.Add(new User(name));
08         callback(users.Count);
09     }
10 }
11
12 public class Runner
13 {
14
15     UserTracker tracker = new UserTracker();
16     public void Add(string name)
17     {
18
19     }
20 }
```

You need to add a user to the UserTracker instance.
What should you do?

- ☐ A. Insert the following code segment at line 14:

```
private static void PrintUserCount(int i)
{
    ...
}
```

Insert the following code segment at line 18:

```
AddUserCallback callback = PrintUserCount;
```

- ☐ B. Insert the following code segment at line 11:

```
delegate void AddUserDelegate(UserTracker userTracker);
```

Insert the following code segment at line 18:

```
AddUserDelegate addDelegate = (userTracker) =>
{
    ...
};
addDelegate(tracker);
```

- ☐ C. Insert the following code segment at line 11:

```
delegate void AddUserDelegate(string name, AddUserCallback callback);
```

Insert the following code segment at line 18:

```
AddUserDelegate adder = (i, callback) =>
{
    ...
};
```

- ☐ D. Insert the following code segment at line 18:

```
tracker.AddUser(name, delegate(int i)
{
    ...
});
```

3.

You develop an application that displays information from log files when errors occur. The application will prompt the user to create an error report that sends details about the error and the session to the administrator.

When a user opens a log file by using the application, the application throws an exception and closes.

The application must preserve the original stack trace information when an exception occurs during this process.

You have the following code:

```
Target 1
{
    try
    {
        string line;
        while ((line = sr.ReadLine()) != null)
        {
            Console.WriteLine(line);
        }
    }
    catch (FileNotFoundException e)
    {
        Console.Write(e.ToString());
        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.

NOTE: Each correct selection is worth one point.

Select and Place:

Code Segments

using(StringReader sr = new StringReader("log.txt"))

using(StreamReader sr = new StreamReader("log.txt"))

throw new FileNotFoundException();

throw;

Ans

4.

You are developing an application that includes a class named Kiosk. The Kiosk class includes a static property named Catalog. The Kiosk class is defined by the following code segment. (Line numbers are included for reference only.)

```
01 public class Kiosk
02 {
03     static Catalog _catalog = null;
04     static object _lock = new object();
05     public static Catalog Catalog
06     {
07         get
08         {
09
10             return _catalog;
11         }
12     }
13 }
```

You have the following requirements:

- > Initialize the _catalog field to a Catalog instance.
- > Initialize the _catalog field only once.
- > Ensure that the application code acquires a lock only when the _catalog object must be instantiated.

You need to meet the requirements.

Which three code segments should you insert in sequence at line 09? (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:

lock (_lock)

if (_catalog != null) _catalog = new Catalog
();

if (_catalog != null)

if (_catalog == null) _catalog = new Catalog
();

if (_catalog == null)

5.

You are developing an application that will include a method named `GetData`. The `GetData()` method will retrieve several lines of data from a web service by using a `System.IO.StreamReader` object.

You have the following requirements:

-> The `GetData()` method must return a string value that contains the entire response from the web service.

-> The application must remain responsive while the `GetData()` method runs.

You need to implement the `GetData()` method.

How should you complete the relevant code? (To answer, drag the appropriate objects to the correct locations in the answer area. Each object 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:

The screenshot shows a code completion interface. On the left, there is a list of methods in yellow boxes: `ReadLineAsync();`, `ReadToEndAsync();`, `await`, `async`, `ReadLine();`, `ReadToEnd();`, and `ToString();`. On the right, there is a code snippet for the `GetData` method. The code is as follows:

```
public [ ] void GetData(WebResponse response)
{
    string urlText;

    var sr = new StreamReader(response.GetResponseStream());

    urlText = [ ] await sr. [ ]
}
```

The interface includes a vertical split bar between the list of methods and the code snippet, and a horizontal split bar at the top of the code area.

6.

You are adding a public method named `UpdateScore` to a public class named `ScoreCard`.

The code region that updates the score field must meet the following requirements:

- > It must be accessed by only one thread at a time.
- > It must not be vulnerable to a deadlock situation.

You need to implement the `UpdateScore()` method.

What should you do?

☐ A. Place the code region inside the following lock statement:

```
lock (this)
{
    ...
}
```

☐ B. Add a private object named **lockObject** to the **ScoreCard** class. Place the following code in the `UpdateScore()` method:

```
lock (lockObject)
{
    ...
}
```

☐ C. Apply the following attribute to the **UpdateScore()** method signature: `[MethodImpl(MethodImplOptions.Synchronized)]`

☐ D. Add a public static object named **lockObject** to the **ScoreCard** class. Place the following code in the `UpdateScore()` method:

```
lock (typeof(ScoreCard))
{
    ...
}
```

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

7.

You are developing an application that includes a class named Warehouse. The Warehouse class includes a static property named Inventory- The Warehouse class is defined by the following code segment. (Line numbers are included for reference only.)

```
01 public class Warehouse
02 {
03     static Inventory _inventory = null;
04     static object _lock = new object();
05     public static Inventory Inventory
06     {
07         get
08         {
09
10             return _inventory;
11         }
12     }
13 }
```

You have the following requirements:

- > Initialize the _inventory field to an Inventory instance.
- > Initialize the _inventory field only once.
- > Ensure that the application code acquires a lock only when the _inventory object must be instantiated.

You need to meet the requirements.

Which three code segments should you insert in sequence at line 09? (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:

Code Segments

if (_inventory != null) _inventory = new Inventory();

lock (_lock)

if (_inventory == null) _inventory = new Inventory();

if (_inventory == null)

if (_inventory != null)

Ans1

8.

You are developing an application that includes a class named `BookTracker` for tracking library books. The application includes the following code segment. (Line numbers are included for reference only.)

```
01 public delegate void AddBookCallback(int i);
02 public class BookTracker
03 {
04     List<Book> books = new List<Book>();
05     public void AddBook(string name, AddBookCallback callback)
06     {
07         books.Add(new Book(name));
08         callback(books.Count);
09     }
10 }
11
12 public class Runner
13 {
14
15     BookTracker tracker = new BookTracker();
16     public void Add(string name)
17     {
18
19     }
20 }
```

You need to add a user to the BookTracker instance. What should you do?

- ☐ A. Insert the following code segment at line 14:

```
private static void PrintBookCount(int i)
{
    ...
}
```

Insert the following code segment at line 18:

```
AddBookCallback callback = PrintBookCount;
```

- ☐ B. Insert the following code segment at line 18:

```
tracker.AddBook(name, delegate(int i)
{
    ...
});
```

- ☐ C. Insert the following code segment at line 11:

```
delegate void AddBookDelegate(BookTracker bookTracker);
```

Insert the following code segment at line 18:

```
AddBookDelegate addDelegate = (bookTracker) =>
{
    ...
};
addDelegate(tracker);
```

- ☐ D. Insert the following code segment at line 11:

```
delegate void AddBookDelegate(string name, AddBookCallback callback);
```

Insert the following code segment at line 18:

```
AddBookDelegate adder = (i, callback) =>
{
    ...
};
```

9.

You are implementing a method that creates an instance of a class named User and adds the user to the users list. The User class contains a public event named Renamed. The following code segment defines the Renamed event:

Public event EventHandler<RenameEventArgs> Renamed;

You need to create an event handler for the Renamed event by using a lambda expression.

You have the following code:

```
List< User > users = new List< User >();  
public void ADDUser(string name)  
{  
    User user = new User (name);  
    Target 1  
    {  
        Log("User {0} was renamed to {1}", e.OldName, e.Name)  
    };  
    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.

NOTE: Each correct selection is worth one point.

Select and Place:

Code Segments

user.Renamed -=delegate(object sender, RenameEventArgs e)

user.Renamed -= (sender, e) =>

user.Renamed +=delegate(object sender, RenameEventArgs e)

user.Renamed += (sender, e) =>

users[0] = user;

users.Add(user);

users.Insert(user);

Answer Area

10.

You are developing an application that uses structured exception handling. The application includes a class named `Logger`. The `Logger` class implements a method named `Log` by using the following code segment: `public static void Log(Exception ex) { }`

You have the following requirements:

- > Log all exceptions by using the `Log()` method of the `Logger` class.
- > Rethrow the original exception, including the entire exception stack.

You need to meet the requirements. Which code segment should you use?

- A.

```
catch
{
    var ex = new Exception();
    throw ex;
}
```
- B.

```
catch (Exception ex)
{
    Logger.Log(ex);
    throw ex;
}
```
- C.

```
catch
{
    Logger.Log(new Exception());
    throw;
}
```
- D.

```
catch (Exception ex)
{
    Logger.Log(ex);
    throw;
}
```

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

11.

You use the Task.Run() method to launch a long-running data processing operation. The data processing operation often fails in times of heavy network congestion.

If the data processing operation fails, a second operation must clean up any results of the first operation.

You need to ensure that the second operation is invoked only if the data processing operation throws an unhandled exception.

What should you do?

- A. Create a task within the operation, and set the Task.StartOnError property to true.
- B. Create a TaskFactory object and call the ContinueWhenAll() method of the object.
- C. Create a task by calling the Task.ContinueWith() method.
- D. Use the TaskScheduler class to create a task and call the TryExecuteTask() method on the class.
- E. Create a TaskCompletionSource<T> object and call the TrySetException() method of the object.
- F. Examine the Task.Status property immediately after the call to the Task.Run() method.
- G. Create a task inside the existing Task.Run() method by using the AttachedToParent option.

12.

You are developing a method named Method1 for a class named Class1, and returns to a decimal value.

You need to ensure that calls to Method1 support being executed on separate threads.

How should you complete the method signature? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

<div>▼</div> <div>async</div> <div>await</div> <div>delegate</div>	<div>▼</div> <div>decimal</div> <div>Task</div> <div>Task <decimal></div>	Method1 (int parameter1)
--	---	--------------------------

13.

You are developing an application that implements a set of custom exception types. You declare the custom exception types by using the following code segments:

```
public class AdventureWorksException : System.Exception { }
```

```
public class AdventureWorksDbException : AdventureWorksException { }
```

```
public class AdventureWorksValidationException : AdventureWorksException { }
```

The application includes a function named DoWork that throws .NET Framework exceptions and custom exceptions. The application contains only the following logging methods:

```
static void Log(Exception ex) { }  
static void Log(AdventureWorksException ex) { }  
static void Log(AdventureWorksValidationException ex) { }
```

The application must meet the following requirements:

-> When AdventureWorksValidationException exceptions are caught, log the information by using the static void Log method.

(AdventureWorksValidationException ex)

-> When AdventureWorksDbException or other AdventureWorksException exceptions are caught, log the information by using the static void Log method.

(AdventureWorksException ex)

You need to meet the requirements.

You have the following code:

```
try  
{  
    DoWork();  
}  
catch Target1  
{  
    Log(ex);  
}  
catch Target2  
{  
    Log(ex);  
}  
catch Target3  
{  
    Log(ex);  
}
```

Which code segments should you include in Target 1, Target 2 and Target 3 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.

NOTE: Each correct selection is worth one point.

Select and Place:

Code Segments

(AdventureWorksValidationException ex)

(AdventureWorksException ex)

(Exception ex)

(AdventureWorksDbException ex)

Answer Area

Target 1:

Target 2:

Target 3:

14.

You have a method named `GetCustomerIDs` that returns a list of integers. Each entry in the list represents a customer ID that is retrieved from a list named `Customers`. The `Customers` list contains 1,000 rows.

Another developer creates a method named `ValidateCustomer` that accepts an integer parameter and returns a Boolean value. `ValidateCustomer` returns true if the integer provided references a valid customer. `ValidateCustomer` can take up to one second to run.

You need to create a method that returns a list of valid customer IDs. The code must run in the shortest amount of time.

Which four code blocks should you use to develop the solution? To answer, move the appropriate code blocks from the list of code blocks to the answer area and arrange them in the correct order.

Select and Place:

```
public List<Int32> GetValidCustomers()  
{
```

```
Task<List<Int32>> validCustomers =
```

```
(from c in customers  
where ValidateCustomer(c)  
select c).ToList();
```

```
return validCustomers;  
}
```

```
(from c in customers  
where ValidateCustomer(c)  
select c).AsParallel().ToList();
```

```
public async Task<List<Int32>> GetValidCusto  
mers()
```

```
(from c in customers.AsParallel()  
where ValidateCustomer(c)  
select c).ToList();
```

```
List<Int32> validCustomers =
```

15.

You have a List object that is generated by executing the following code:

```
List<string> departments = new List<string>()
{
    "Accounting", "Marketing", "Sales", "Manufacturing", "Information Systems", "Training"
};
```

You have a method that contains the following code (line numbers are included for reference only):

```
01 private bool GetMatches(List<string> departments, string searchTerm)
02 {
03     var findDepartment = departments.Exists(delegate(string deptName)
04     {
05         return deptName.Equals(searchTerm);
06     }
07     ));
08     return findDepartment;
09 }
```

You need to alter the method to use a lambda statement.

How should you rewrite lines 03 through 06 of the method?

- A. `var findDepartment = departments.First(x => x == searchTerm);`
- B. `var findDepartment = departments.Where(x => x == searchTerm);`
- C. `var findDepartment = departments.Exists(x => x.Equals(searchTerm));`
- D. `var findDepartment = departments.Where(x => x.Equals(searchTerm));`

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

16.

You are adding a function to a membership tracking application. The function uses an integer named `memberCode` as an input parameter and returns the membership type as a string.

The function must meet the following requirements:

- > Return "Non-Member" if the `memberCode` is 0.
- > Return "Member" if the `memberCode` is 1.
- > Return "Invalid" if the `memberCode` is any value other than 0 or 1.

You need to implement the function to meet the requirements.

How should you complete the relevant code? (To answer, drag the appropriate statements to the correct locations in the answer area. Each statement 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:

default

switch

break

case

```
private string GetMemberType(int memberCode)
{
    string memberType;
    [ ] (memberCode)
    {
        [ ] 0:
            memberType = "Non-Member";
            [ ];
        [ ] 1:
            memberType = "Member";
            [ ];
        [ ] :
            memberType = "Invalid";
            [ ];
    }
    return memberType;
}
```

17.

You are developing an application.

You need to declare a delegate for a method that accepts an integer as a parameter, and then returns an integer.

Which type of delegate should you use?

- A.** Action<int>
- B.** Action<int,int>
- C.** Func<int,int>
- D.** Func<int>

18.

You are creating a method that saves information to a database.

You have a static class named LogHelper. LogHelper has a method named Log to log the exception.

You need to use the LogHelper Log method to log the exception raised by the database server. The solution must ensure that the exception can be caught by the calling method, while preserving the original stack trace.

How should you write the catch block? (Develop the solution by selecting and ordering the required code snippets. You may not need all of the code snippets.)

Select and Place:

`catch {`

`catch (SQLException ex) {`

`catch (FileNotFoundException ex) {`

`throw;`

`}`

`throw new FileNotFoundException();`

`throw ex;`

`LogHelper.Log(ex);`

`throw new SQLException();`

19.

You have the following code:

```
public class Alert
{
    public event EventHandler<EventArgs> SendMessage;

    public void Execute()
    {
        SendMessage(this, new EventArgs());
    }
}

public class Subscriber
{
    Alert alert = new Alert();

    public void Subscribe()
    {
        alert.SendMessage += (sender, e) => { Console.WriteLine("First"); };
        alert.SendMessage += (sender, e) => { Console.WriteLine("Second"); };
        alert.SendMessage += (sender, e) => { Console.WriteLine("Third"); };
        alert.SendMessage += (sender, e) => { Console.WriteLine("Third"); };
    }

    public void Execute()
    {
        alert.Execute();
    }

    public static void Main()
    {
        Subscriber subscriber = new Subscriber();
        subscriber.Subscribe();
        subscriber.Execute();
    }
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.
Hot Area:

	Yes	No
If there are no subscribers to the SendMessage event, the Execute method on the Alert class will throw an exception.	<input type="radio"/>	<input type="radio"/>
When the application runs, "First" will always appear before "Second".	<input type="radio"/>	<input type="radio"/>
When the application runs, "Third" will be displayed once.	<input type="radio"/>	<input type="radio"/>

20.

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

```
01 public class Program
02 {
03     private static System.Diagnostics.Stopwatch _execTimer =
04         new System.Diagnostics.Stopwatch();
05     public static void Delay(int delay)
06     {
07         Thread.Sleep(delay);
08     }
09     public static void LogLongExec(string msg)
10     {
11         if (_execTimer.Elapsed.Seconds >= 5)
12             throw new Exception(
13                 string.Format("Execution is too long > {0} > {1}",
14                     msg, _execTimer.Elapsed.TotalMilliseconds));
15     }
16     public static void Main()
17     {
18         _execTimer.Start();
19         try
20         {
21             Delay(10);
22             LogLongExec("Delay(10)");
23             Delay(5000);
24             LogLongExec("Delay(5000)");
25         }
26         catch (Exception ex)
27         {
28         }
29     }
30 }
31 }
```

You need to ensure that if an exception occurs, the exception will be logged.

Which code should you insert at line 28?

- A.

```
System.Diagnostics.TraceSource trace = new TraceSource("./Trace.log");
trace.TraceEvent(TraceEventType.Error, ex.HResult, ex.Message);
```
- B.

```
using (System.Diagnostics.XmlWriterTraceListener log1 =
    new XmlWriterTraceListener("./Error.log"))
{
    log1.TraceEvent(
        new TraceEventCache(), ex.Message, TraceEventType.Error, ex.HResult);
    log1.Flush();
}
```
- C.

```
System.Diagnostics.EventInstance errorEvent =
    new System.Diagnostics.EventInstance(ex.HResult, 1, EventLogEntryType.Error);
System.Diagnostics.EventLog.WriteEvent("MyAppErrors", errorEvent, ex.Message);
```
- D.

```
EventLog logEntry = new EventLog();
logEntry.Source = "Application";
logEntry.WriteEntry(ex.Message, EventLogEntryType.Error);
```

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

21.

An application is throwing unhandled `NullReferenceException` and `FormatException` errors. The stack trace shows that the exceptions occur in the `GetWebResult()`

The application includes the following code to parse XML data retrieved from a web service. (Line numbers are included for reference only.)

```
01 int GetWebResult(XElement result)
02 {
03     return int.Parse(result.Element("response").Value);
04 }
```

You need to handle the exceptions without interfering with the existing error-handling infrastructure.

Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

- A. Replace line 03 with the following code segment:

```
int returnValue;
int.TryParse(result.Element("response").Value, out returnValue);
return returnValue;
```

- B. Replace line 03 with the following code segment:

```
return int.ParseOptions.Safe(result.Element("response").Value);
```

- C. Register an event handler with `AppDomain.CurrentDomain.UnhandledException`.

- D. Use a **try...catch** statement to handle the exceptions in the **GetWebResult()** method.

22.

You have the following C# code.

```
public class Vendor
{
    public double TotalPrice {get;set;}
}
public class Partner : Vendor{}
```

You create a function named getDiscount that has the following method signature. (Line numbers are included for reference only.)

```
01 public static double getDiscount(Vendor vendor)
02 {
03     switch(vendor)
04     {
05
06     }
07 }
```

You need to modify getDiscount to return the amount of the discount. The solution must meet the following requirements:

- > If the vendor object is a type of Partner object and TotalPrice is greater than 1,000, the discount must be 30 percent.
- > If the vendor object is a type of Partner object and TotalPrice is less than or equal to 1,000 the discount must be 20 percent
- > If the vendor object is NOT a type of Partner object, the discount must be 10 percent
- > If the vendor object is null, an exception must be raised

Which four code blocks should you use to complete the switch statement at line 05? To answer, move the appropriate code blocks from the list of code blocks to the answer area and arrange them in the correct order.

NOTE: Each correct selection is worth one point.

Select and Place:

Code Blocks

```
case Partner p:  
return p.TotalPrice * 0.70;
```

```
case Partner p when p.TotalPrice <=  
1000: return p.TotalPrice * 0.80;
```

```
case null: throw new  
ArgumentNullException(nameof  
(vendor));
```

```
case Vendor v when  
vendor.TotalPrice <= 1000: return  
v.TotalPrice * 0.80;
```

```
case Partner p when p.TotalPrice >  
1000: return p.TotalPrice * 0.80;
```

```
case Partner p when p is null:  
throw new  
ArgumentNullException(nameof(p));
```

```
case Vendor v: return v.TotalPrice  
* 0.90;
```

23.

An application contains code that measures reaction times. The code runs the timer on a thread separate from the user interface. The application includes the following code. (Line numbers are included for reference only.)

```
01 static int RunTimer(CancellationToken cancellationToken)
02 {
03     var time = 0;
04     while (!cancellationToken.IsCancellationRequested)
05         time++;
06     return time;
07 }
08 static void Main(string[] args)
09 {
10     var tokenSource = new CancellationTokenSource();
11     var task = Task.Factory.StartNew<int>(() => RunTimer(tokenSource.Token));
12     Console.WriteLine("Press [Enter] to stop the timer.");
13     Console.ReadLine();
14
15     Console.WriteLine("Timer stopped at {0}", task.GetAwaiter().GetResult());
16     Console.ReadLine();
17 }
```

You need to ensure that the application cancels the timer when the user presses the Enter key. Which code segment should you insert at line 14?

- A. tokenSource.Token.Register(() => tokenSource.Cancel());
- B. tokenSource.Cancel();
- C. tokenSource.IsCancellationRequested = true;
- D. tokenSource.Dispose();

24.

You are developing an application that uses multiple asynchronous tasks to optimize performance. The application will be deployed in a distributed environment. You need to retrieve the result of an asynchronous task that retrieves data from a web service. The data will be later being parsed by a separate task. Which code segment should you use?

A.

```
protected async void StartTask()
{
    string result = await GetData();
    ...
}
public Task<string> GetData()
{
    ...
}
```

B.

```
protected async void StartTask()
{
    string result = GetData();
    ...
}
public Task<string> GetData()
{
    ...
}
```

C.

```
protected async void StartTask()
{
    string result = await GetData();
    ...
}
public async Task<string> GetData()
{
    ...
}
```

D.

```
protected async void StartTask()
{
    string result = async GetData();
    ...
}
```


25.

You are developing an application.

The application contains the following code:

```
class Program
{
    static void ProcessOrders (string orderRefNumber)
    {
        if (orderRefNumber == null)
        {
            throw new ArgumentNullException();
        }
        ...
    }

    static void Main()
    {
        try
        {
            string orderRefNumber = null;
            ProcessOrders(orderRefNumber);
        }
        catch (ArgumentNullException e)
        {
            Console.WriteLine("{0} An exception caught.", e);
        }

        catch (Exception e)
        {
            Console.WriteLine("{0} An exception caught.", e);
        }
    }
}
```

When you compile the code, you receive the following syntax error message: "A previous catch clause already catches all exceptions of this or a super type ('System.Exception')."

You need to ensure that the code can be compiled. What should you do?

- A. Catch the ArgumentException exception instead of the ArgumentNullException exception.
- B. Throw a new exception in the second catch block.
- C. Catch the ArgumentNullException exception first.
- D. Re-throw the exception caught by the second catch block.

26.

You are developing a class named `Account` that will be used by several applications. The applications that will consume the `Account` class will make asynchronous calls to the `Account` class to execute several different methods.

You need to ensure that only one call to the methods is executed at a time.

Which keyword should you use?

- A.** `sealed`
- B.** `protected`
- C.** `checked`
- D.** `lock`

27.

You are adding a method to an existing application. The method uses an integer named `statusCode` as an input parameter and returns the status code as a string.

The method must meet the following requirements:

- > Return "Error" if the `statusCode` is 0.
- > Return "Success" if the `statusCode` is 1.
- > Return "Unauthorized" if the `statusCode` is any value other than 0 or 1.

You need to implement the method to meet the requirements.

How should you complete the relevant code? (To answer, drag the appropriate statements to the correct locations in the answer area. Each statement 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:

The interface consists of a left pane with a list of keywords and a right pane with a code template. A vertical blue bar with a dotted split handle separates the two panes.

Keywords:

- default
- switch
- break
- case

Code Template:

```
string statusText;  
[ ](statusCode)  
{  
    [ ] 0:  
        statusText = "Error";  
        [ ] ;  
    [ ] 1:  
        statusText = "Success";  
        [ ] ;  
    [ ] :  
        statusText = "Unauthorized";  
    [ ] ;  
}  
return statusText;
```

28.

You are implementing a method named `ProcessData` that performs a long-running task. The `ProcessData()` method has the following method signature: `public void ProcessData(List<decimal> values, CancellationTokenSource source, CancellationToken token)`

If the calling code requests cancellation, the method must perform the following actions:

- > Cancel the long-running task.
- > Set the task status to `TaskStatus.Canceled`.

You need to ensure that the `ProcessData()` method performs the required actions.

Which code segment should you use in the method body?

- A.** `if (token.IsCancellationRequested) return;`
- B.** `throw new AggregateException();`
- C.** `token.ThrowIfCancellationRequested();`
- D.** `source.Cancel();`

29.

You are developing an application in C#.

The application uses exception handling on a method that is used to execute mathematical calculations by using integer numbers.

You write the following catch blocks for the method (line numbers are included for reference only):

```
01
02 catch (ArithmeticException e) { Console.WriteLine("Arithmetic error"); }
03
04 catch (ArgumentException e) { Console.WriteLine("Bad Argument"); }
05
06 catch (Exception e) { Console.WriteLine("General error"); }
07
```

You need to add the following code to the method:

```
catch (DivideByZeroException e) { Console.WriteLine("Divide by zero"); }
```

At which line should you insert the code?

- A.** 01
- B.** 03
- C.** 05
- D.** 07

30.

You develop an application by using C#. The application counts the number of times a specific word appears within a set of text files. The application includes the following code. (Line numbers are included for reference only.)

```
01 class Counter
02 {
03     System.Collections.Concurrent.ConcurrentDictionary<string, int> _wordCounts =
04         new System.Collections.Concurrent.ConcurrentDictionary<string, int>();
05     public Action<DirectoryInfo> ProcessDirectory()
06     {
07         return (dirInfo =>
08         {
09             var files = dirInfo.GetFiles("*.cs").AsParallel<FileInfo>();
10             files.ForAll<FileInfo>()
11                 fileInfo =>
12                 {
13                     var fileContent = File.ReadAllText(fileInfo.FullName);
14                     var sb = new StringBuilder();
15                     foreach (var val in fileContent)
16                     {
17                         sb.Append(char.IsLetter(val) ? val.ToString().ToLowerInvariant() : " ");
18                     }
19                     string[] wordsInFile = sb.ToString().Split(new []{ ' ' },
20                         StringSplitOptions.RemoveEmptyEntries);
21                     foreach (var word in wordsInFile)
22                     {
23                         // ...
24                     }
25                 });
26             var directories = dirInfo.GetDirectories().AsParallel<DirectoryInfo>();
27             directories.ForAll<DirectoryInfo>(ProcessDirectory());
28         });
29     }
30 }
```

You have the following requirements:

-> Populate the `_wordCounts` object with a list of words and the number of occurrences of each word.

-> Ensure that updates to the `ConcurrentDictionary` object can happen in parallel.

You need to complete the relevant code.

Which code segment should you insert at line 23?

A. `_wordCounts.AddOrUpdate(word, 1, (s, n) => n + 1);`

B. `int value;
if (_wordCounts.TryGetValue(word, out value))
{
 _wordCounts[word] = value++;
}
else
{
 _wordCounts[word] = 1;
}`

C. `var value = _wordCounts.GetOrAdd(word, 0);
_wordCounts[word] = value++;`

D. `var value = _wordCounts.GetOrAdd(word, 0);
_wordCounts.TryUpdate(word, value + 1, value);`

31.

You are developing an application that will use multiple asynchronous tasks to optimize performance.

You create three tasks by using the following code segment. (Line numbers are included for reference only.)

```
01 protected void ProcessTasks()  
02 {  
03     Task[] tasks = new Task[3]  
04     {  
05         Task.Factory.StartNew(() => MethodA()),  
06         Task.Factory.StartNew(() => MethodB()),  
07         Task.Factory.StartNew(() => MethodC())  
08     };  
09  
10     ...  
11 }
```

You need to ensure that the ProcessTasks() method waits until all three tasks complete before continuing.

Which code segment should you insert at line 09?

- A. Task.WaitFor(3);
- B. tasks.Yield();
- C. tasks.WaitForCompletion();
- D. Task.WaitAll(tasks);