Question B:

1. What improvements can be made?
   1. First thing which we can improve in this code is, we can call the SMTP setting from the web.config file or We can store the SMTP settings in the database and use them here.
   2. You have created the Send Email code in both classes. We can create a new method in a common class which can be called on these both classes. We just need to pass the required parameters.
2. What SOLID principle(s) can help here?
   1. SOLID can help in this problem. As I described above we need to create the common class in order to handle the Send Mail functionality. We can Implement the Single SRP (Single responsibility principle)
3. What is the best architectural decision?
   1. As per the current code of two classes. I can say that we can improve it by providing the SMTP details from a common area and We can also make some common methods which will help us in the maintenance.

(submit answers in text document)

\* Put the document in the same repo on a branch called “Question\_B”.

class A

{

    public A()

    {

    }

    private void SolveBinomial()

    {

       // Do work ...

       // ...

       // Send email ...

       string[] args = new string[0];

       SmtpClient client = new SmtpClient(args[0]);

       MailAddress from = new MailAddress("jane@contoso.com", "Jane Clayton", System.Text.Encoding.UTF8);

       MailAddress to = new MailAddress("ben@contoso.com");

       MailMessage message = new MailMessage(from, to);

       message.Body = "Hi Ben, this is Jane, how's it going?";

       client.SendCompleted += new SendCompletedEventHandler(binomialEventHandler);

       string userState = "test message1";

       client.SendAsync(message, userState);

       message.Dispose();

    }

}

class B

{

    public B()

    {

    }

    private void SolveTrinomial()

    {

       // Do work ...

       // ...

       // Send email ...

       string[] args = new string[0];

       SmtpClient client = new SmtpClient(args[0]);

       MailAddress from = new MailAddress("bob@contoso.com", "Bob Doe", System.Text.Encoding.UTF8);

       MailAddress to = new MailAddress("sarah@contoso.com");

       MailMessage message = new MailMessage(from, to);

       message.Body = "Hi Sarah, here are the calculations...";

       client.SendCompleted += new SendCompletedEventHandler(trinomialEventHandler);

       string userState = "test message1";

       client.SendAsync(message, userState);

       message.Dispose();

    }

}