1. Suppose you want to draw a hexagon (six sides). On the back of the page, write the code for a class that draws a hexagon. The parameters to the function should be: device, x, y, radius, color.

```csharp
/// <summary>
/// This simple class describes a hexagon that we can move around.
/// </summary>
public class Hexagon1
{
    /// <summary>
    /// The vertices of the hexagon as a vertex buffer
    /// </summary>
    private VertexBuffer vertices = null;

    /// <summary>
    /// Draw the hexagon
    /// </summary>
    /// <param name="device">Device to draw on</param>
    /// <param name="color">Hexagon color</param>
    public void Draw(Device device, float x, float y, float radius, Color color)
    {
        if (vertices == null)
        {
            vertices = new VertexBuffer(typeof(CustomVertex.PositionColored),
                6, // How many device,
                0, // What device
                0, // No special usage
                CustomVertex.PositionColored.Format,
                Pool.Managed);
        }

        GraphicsStream gs = vertices.Lock(0, 0, 0); // Lock the bg vertex list
        int clr = color.ToArgb();

        for (int i = 0; i < 6; i++)
        {
            float angle = (float)(i * Math.PI / 3);
            float vx = (float)Math.Cos(angle) * radius + x;
            float vy = (float)Math.Sin(angle) * radius + y;

            gs.Write(new CustomVertex.PositionColored(vx, vy, 0, clr));
        }

        vertices.Unlock();
        device.SetStreamSource(0, vertices, 0);
        device.VertexFormat = CustomVertex.PositionColored.Format;
        device.DrawPrimitives(PrimitiveType.TriangleFan, 0, 4);
    }
}
```
2. Write the code for the Render function that will draw the hexagon using your class.

```
hexagon.Draw(device, 2, 2, 1, Color.Bisque);
```

It is time 7.2 seconds. You have an object with p=(1,1), v=(2, 3), r=3.14, rv=6. The last time Step was called, the time was 7.1 seconds.

3. After the Euler step, what will p be?

We know that \( dt = 7.2 - 7.1 = 0.1 \)
\[
p += v \times dt \\
(1, 1) + (2, 3) \times 0.1 = (1.2, 1.3)
\]

4. After the Euler step, what will r be?

\[ 3.14 + 6 \times 0.1 = 3.74 \]

5. Suppose we add a=(10,10) to our model. After the Euler step, what would p be?

velocity: \( (2, 3) + (10, 10) \times 0.1 = (3, 4) \)
position: \( (1, 1) + (3, 4) \times 0.1 = (1.3, 1.4) \)
r: \( 3.14 + 6 \times 0.1 = 3.74 \)