```matlab
y =@(x) (exp(x)*sin(x))/(1+x.^2)


fprintf('Modified will be');

% x_new = (((b-a)/2)*x + (b+a)/2)
a = 0;
b = 2;

y =@(x,a,b) ((exp((((b-a)/2)*x + (b+a)/2))*sin((((b-a)/2)*x + (b
+a)/2)))/(1+(((b-a)/2)*x + (b+a)/2).^2))*((b-a)/2)

integ_2point = y(-1/sqrt(3),a,b) + y(1/sqrt(3),a,b)

integ_3point = (0.555556)*y(-0.774596669,a,b) + (0.88889)*y(0,a,b) +
 (0.555556)*y(0.77459669,a,b)

integ_4point = (0.347854)*y(-0.8611363,a,b) +
 (0.6521451)*y(-0.339981,a,b)...
                +(0.6521451)*y(0.339981,a,b) +
 (0.347854)*y(0.8611363,a,b)

integ_5point = (0.2369268)*y(-0.906179846,a,b) +
 (0.4786286)*y(-0.538469310,a,b)...
                +(0.56888889)*y(0,a,b) +
 (0.4786286)*y(0.538469310,a,b)...
                + (0.2369268)*y(-0.906179846,a,b)
integ_6point = (0.171324492)*y(-0.9324695,a,b) +
 (0.360761573)*y(-0.6612093,a,b)...
                + (0.4679139)*y(-0.2386191,a,b) +
 (0.4679139)*y(0.2386191,a,b)...
                + (0.360761573)*y(0.6612093,a,b) +
 (0.171324492)*y(0.9324695,a,b)


y =

  function_handle with value:

    @(x)(exp(x)*sin(x))/(1+x.^2)

Modified will be
y =

  function_handle with value:

    @(x,a,b)((exp((((b-a)/2)*x+(b+a)/2))*sin((((b-a)/2)*x+(b+a)/2)))/
(1+(((b-a)/2)*x+(b+a)/2).^2))*((b-a)/2)


integ_2point =
```

```
    1.9192


integ_3point =

    1.9380


integ_4point =

    1.9406


integ_5point =

    1.6395


integ_6point =

    1.9401
```

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