Command Window

```
>> test_bisectQ1
Iteration#     xl          xu          xr          f(xl)          f(xu)          f(xr)          error_a%
    0        0.2000      0.5000      0.2000      12.7065        -4.2486        12.7065        100.0000
    1        0.3500      0.5000      0.3500       2.3387        -4.2486         2.3387         42.8571
    2        0.3500      0.4250      0.4250       2.3387        -1.2809        -1.2809         17.6471
    3        0.3875      0.4250      0.3875       0.4341        -1.2809         0.4341          9.6774
    4        0.3875      0.4063      0.4063       0.4341        -0.4452        -0.4452          4.6154
    5        0.3875      0.3969      0.3969       0.4341        -0.0113        -0.0113          2.3622
    6        0.3922      0.3969      0.3922       0.2100        -0.0113         0.2100          1.1952
    7        0.3945      0.3969      0.3945       0.0990        -0.0113         0.0990          0.5941
    8        0.3957      0.3969      0.3957       0.0438        -0.0113         0.0438          0.2962
    9        0.3963      0.3969      0.3963       0.0162        -0.0113         0.0162          0.1479
   10        0.3966      0.3969      0.3966       0.0025        -0.0113         0.0025          0.0739
   11        0.3966      0.3967      0.3967       0.0025        -0.0044        -0.0044          0.0369

cd =

    0.3967


fx =

   -0.0044


ea =

    0.0369


iter =

    11
```

Criteria #1:

```
>> test_regulaFalsi
Enter 1 to use true error. Enter 2 to use absolute approximate error. Enter 3 to use relative approximate error:1
Iteration#     x0          x1          f(x0)          f(x1)
    0       -7.0000     -5.0000       -2.3142        0.9162
    1       -7.0000     -5.5672       -2.3142        0.3117
    2       -7.0000     -5.7373       -2.3142        0.0375
    3       -7.0000     -5.7575       -2.3142        0.0029
    4       -7.0000     -5.7590       -2.3142        0.0002
    5       -7.0000     -5.7591       -2.3142        0.0000
    6       -7.0000     -5.7591       -2.3142        0.0000
    7       -7.0000     -5.7591       -2.3142        0.0000

ans =

   -5.7591

Iteration#     x0          x1          f(x0)          f(x1)
    0       -3.0000     -5.0000       -1.2947        0.9162
    1       -3.0000     -4.1712       -1.2947        0.7103
    2       -3.0000     -3.7563       -1.2947        0.1476
    3       -3.0000     -3.6789       -1.2947        0.0173
    4       -3.0000     -3.6699       -1.2947        0.0018
    5       -3.0000     -3.6690       -1.2947        0.0002
    6       -3.0000     -3.6689       -1.2947        0.0000
    7       -3.0000     -3.6689       -1.2947        0.0000
    8       -3.0000     -3.6689       -1.2947        0.0000

ans =

   -3.6689
```

Criteria #2:

```
>> test_regulaFalsi
Enter 1 to use true error. Enter 2 to use absolute approximate error. Enter 3 to use relative approximate error:2
Iteration#     x0          x1          f(x0)          f(x1)
    0       -7.0000     -5.0000       -2.3142        0.9162
    1       -7.0000     -5.5672       -2.3142        0.3117
    2       -7.0000     -5.7373       -2.3142        0.0375
    3       -7.0000     -5.7575       -2.3142        0.0029
    4       -7.0000     -5.7590       -2.3142        0.0002
    5       -7.0000     -5.7591       -2.3142        0.0000
    6       -7.0000     -5.7591       -2.3142        0.0000
    7       -7.0000     -5.7591       -2.3142        0.0000

ans =

   -5.7591

Iteration#     x0          x1          f(x0)          f(x1)
    0       -3.0000     -5.0000       -1.2947        0.9162
    1       -3.0000     -4.1712       -1.2947        0.7103
    2       -3.0000     -3.7563       -1.2947        0.1476
    3       -3.0000     -3.6789       -1.2947        0.0173
    4       -3.0000     -3.6699       -1.2947        0.0018
    5       -3.0000     -3.6690       -1.2947        0.0002
    6       -3.0000     -3.6689       -1.2947        0.0000
    7       -3.0000     -3.6689       -1.2947        0.0000
    8       -3.0000     -3.6689       -1.2947        0.0000
    9       -3.0000     -3.6689       -1.2947        0.0000

ans =

   -3.6689
```

Criteria #3:

```
>> test_regulaFalsi
Enter 1 to use true error. Enter 2 to use absolute approximate error. Enter 3 to use relative approximate error:3
Iteration#     x0          x1          f(x0)          f(x1)
    0       -7.0000     -5.0000       -2.3142        0.9162
    1       -7.0000     -5.5672     -2.3142        0.3117
    2       -7.0000     -5.7373     -2.3142        0.0375
    3       -7.0000     -5.7575     -2.3142        0.0029
    4       -7.0000     -5.7590     -2.3142        0.0002
    5       -7.0000     -5.7591     -2.3142        0.0000
    6       -7.0000     -5.7591     -2.3142        0.0000
    7       -7.0000     -5.7591     -2.3142        0.0000

ans =

   -5.7591

Iteration#     x0          x1          f(x0)          f(x1)
    0       -3.0000     -5.0000       -1.2947        0.9162
    1       -3.0000     -4.1712     -1.2947        0.7103
    2       -3.0000     -3.7563     -1.2947        0.1476
    3       -3.0000     -3.6789     -1.2947        0.0173
    4       -3.0000     -3.6699     -1.2947        0.0018
    5       -3.0000     -3.6690     -1.2947        0.0002
    6       -3.0000     -3.6689     -1.2947        0.0000
    7       -3.0000     -3.6689     -1.2947        0.0000
    8       -3.0000     -3.6689     -1.2947        0.0000

ans =

   -3.6689
```

As can be seen from above, all the stopping criteria give the same exact results with relatively the same amount of iterations. Therefore, I can conclude that all three of these criteria have an equivalence to each other.