

Problem1:

Expected exit time: 8.8889

Problem2:

$\varepsilon = 2.00$ : Expected exit time = 7.5641

$\varepsilon = 1.50$ : Expected exit time = 7.7975

$\varepsilon = 1.00$ : Expected exit time = 7.5681

$\varepsilon = 0.75$ : Expected exit time = 7.9415

$\varepsilon = 0.50$ : Expected exit time = 8.4252

$\varepsilon = 0.25$ : Expected exit time = 9.5093

$\varepsilon = 0.10$ : Expected exit time = 11.8148

Problem3:

Computing  $x_0 = (0.20, 0.00)$ :  $T = 2.4040$

Computing  $x_0 = (0.80, 0.00)$ :  $T = 7.7315$

Computing  $x_0 = (1.40, 0.00)$ :  $T = 9.4475$

Computing  $x_0 = (2.00, 0.00)$ :  $T = 11.7522$

Computing  $x_0 = (-0.10, 0.17)$ :  $T = 3.0819$

Computing  $x_0 = (-0.40, 0.69)$ :  $T = 6.8183$

Computing  $x_0 = (-0.70, 1.21)$ :  $T = 9.0126$

Computing  $x_0 = (-1.00, 1.73)$ :  $T = 9.3779$

Computing  $x_0 = (-0.10, -0.17)$ :  $T = 3.0353$

Computing  $x_0 = (-0.40, -0.69)$ :  $T = 7.5804$

Computing  $x_0 = (-0.70, -1.21)$ :  $T = 8.9617$

Computing  $x_0 = (-1.00, -1.73)$ :  $T = 9.8599$

Computing  $x_0 = (0.20, -0.00)$ :  $T = 2.9626$

Computing  $x_0 = (0.80, -0.00)$ :  $T = 7.6440$

Computing  $x_0 = (1.40, -0.00)$ :  $T = 9.3180$

Computing  $x_0 = (2.00, -0.00)$ :  $T = 10.7761$