Calculating Roots by Midpoint method

1 If s1 and s2 are 0.6 apart, how close will it be after repeating this process 5 times?

2 Find a root of following function.

Find a root down to 2 digit zeros on Y.

$$Y = \frac{X + 1}{(X - 1)^2} + X - 0.5$$

$0.6 * (1/2)^5 = 0.01875$ 1.875%

X = 0, Y = 0.5, X = - 3.5, Y = -1. We set a = -2, b = 0 initially.

m = -1. Y = - 1.5 so new a = -1

m = -0.5 Y = -0.78. so new a = -0.5

m = -0.25, Y = -0.27, so new a = -0.25

m = - 0.125, Y = 0.07, so new b = -0.125

m = -0.135, Y = 0.04. so new b = -0.135

m = -0.1925, Y = -0.12. so new a = -0.1925

m = -0.1635, Y = -0.05, so new a = -0.1635

m = -0.14925, Y = -0.0051, so new a = -0.14925

Y = -0.0051. Therefore, approximate root is -0.14925