METODA SIECZNYCH

$$x_1 = a - \frac{f(a)}{f(b) - f(a)}(b - a)$$

$a = 0 \quad b = 2$
$f(a) = -1.6321206, \quad f(b) = 4.7182818$
$x_1 = 0 + \frac{f(0)}{f(2)-f(0)} \cdot (2 - 0) = 0.51402115$
$x_2 = 0.79922865$
$x_3 = 0.92318385$
$x_4 = 0.97150403$
$f(x_1) = -1.1206875$
$f(x_2) = -0.54313409$
$f(x_3) = -0.22167148$
$f(x_4) = -0.08427371$

METODA STYCZNYCH

$$x_{n+1} = x_n - \frac{f(x_n)}{f^{(1)}(x_n)}$$

$x_1 = a - \frac{f(a)}{f^{(1)}(a)} = 0 - \frac{f(0)}{f^{(1)}(0)} = 0.27050532 \quad f(x_1) = 357.86761$
$x_2 = 0.5446864 \quad f(x_2) = 126.36209$
$x_3 = 0.78985117 \quad f(x_3) = 38.154506$
$x_4 = 0.94739411 \quad f(x_4) = 7.5353811$
$x_5 = 0.99633456 \quad f(x_5) = 0.49028212$
$x_6 = 0.9999816 \quad f(x_6) = 0.0024489462$
$x_7 = 1 \quad f(x_7) = 0.0000000894$

METODA POŁOWIENIA PRZEDZIAŁÓW

$$a = -0.5$$
$$b = 0.2$$
$$f(-0.5) = 2.0221679$$
$$f(0.2) = -0.80251051$$

$f(x_1 = \frac{a+b}{2} = -0.15) = 0.60108866$	$[-0.5; 0.2]$
$f(x_2 = 0.025) = -0.100052$	$[-0.15; 0.2]$
$f(x_3 = -0.0625) = 0.25008093$	$[-0.15; 0.025]$
$f(x_4 = -0.01875) = 0.075002196$	$[-0.0625; 0.025]$