

# HAND OUT 6

Example of point iteration:

$$F(x) = x^3 - x - 5 = 0$$

$x$	$F(x)$
1.9	-0.041
2.0	1.0

Alternatives:

$$\textcircled{\text{I}} \quad x = x^3 - 5$$

$$\textcircled{\text{II}} \quad x = \frac{5}{x^2 - 1}$$

$$\textcircled{\text{III}} \quad x = \sqrt[3]{x+5}$$

$$x_{k+1} = \psi(x_k)$$

$$x_0 = 1.9$$

$\textcircled{\text{I}}$	$\textcircled{\text{II}}$	$\textcircled{\text{III}}$
1.859	1.9157088	1.90378
1.42448	1.87270	1.90413
-2.10951	1.99441	1.90416
-14.38738	1.87916	1.90416
-2983.1451	1.635769	

