

**EX.1.2.15, Sauer3**

Which of the following three Fixed-Point Iteration converge to  $\sqrt{5}$ ? Rank the ones that converge from fastest to slowest.

$$(a) \quad x \longrightarrow \frac{4}{5}x + \frac{1}{x}; \quad (b) \quad x \longrightarrow \frac{x}{2} + \frac{5}{2x}; \quad (c) \quad x \longrightarrow \frac{x+5}{x+1}.$$