

EX.1.2.14, Sauer3

Which of the following three Fixed-Point Iteration converge to $\sqrt{2}$? Rank the ones that converge from fastest to slowest.

$$(a) \quad x \longrightarrow \frac{1}{2}x + \frac{1}{x}; \quad (b) \quad x \longrightarrow \frac{2}{3}x + \frac{2}{3x}; \quad (c) \quad x \longrightarrow \frac{3}{4}x + \frac{1}{2x}.$$