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