$\sqrt{x-5} = 5 - \sqrt{x}$ Quadrieren

$x - 5 = 25 - 10\sqrt{x} + x$

$-30 = -10\sqrt{x};\ 3 = \sqrt{x}$

$\boxed{x = 9}$

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$\sqrt{5x-4} + \sqrt{x} = 6$

$\sqrt{5x-4} = 6 - \sqrt{x}$

$5x - 4 = 36 - 12\sqrt{x} + x$

$4x - 40 = 12\sqrt{x}$

$x - 10 = 3\sqrt{x}$

$x^2 - 20x + 100 = 9x$

$x^2 - 29x + 100 = 0$

$x = \frac{29}{2} \pm \sqrt{\frac{29^2}{4} - 100} = \frac{1}{2}(29 \pm 21)$

$x \in \{4, 25\}$ Probe: $\sqrt{5*4-4} + \sqrt{4} = 4 + 2$ ok

$\sqrt{5*25-4} + 5 = 11 + 5$ falsch

$\boxed{x = 4}$