Current wealth.

$w_4 = 4.375$

Current bet.

$x_5 = 3.5$

Outcome.

$c_5 = -\nabla f(x_5) = 1$

New wealth.

$w_5 = w_4 + c_5 x_5 = 7.875$

New betting fraction.

$\beta_6 = \dfrac{\sum_{i=1}^{5} c_i}{6} = 0.8\dot{3}$

New bet.

$x_6 = \beta_6 w_5 = 6.5625$