$$W_u(p) = \frac{2p^3 + 2p^2 + 8p}{10p^4 + 10p^3 + 10p^2 + 9p} \qquad W_v(p) = \frac{3p^4 + 2p^3 + 5p^2 + 4p}{10p^4 + 10p^3 + 10p^2 + 9p}$$