Father first (Father-Coach-Father):

The probability of winning two consecutive matches is $P_F(\{WWW, WWL, LWW\})$:

$$P_F(WWW) = 0.75 * 0.4 * 0.75 \; = \; 0.225$$

$$P_F(WWL) = 0.75 * 0.4 * 0.25 \; = \; 0.075$$

$$P_F(LWW) = 0.25 * 0.4 * 0.75 \; = \; 0.075$$

$$\boldsymbol{P_F(\{WWW, WWL, LWW\})} = P_F(WWW) + P_F(WWL) + P_F(LWW) =$$

$$= 0.225 + 0.075 + 0.07 = \mathbf{0.375}$$

Coach first (Coach-Father-Coach):

The probability of winning two consecutive matches is $P_C(\{WWW, WWL, LWW\})$:

$$P_C(WWW) = 0.4 * 0.75 * 0.4 \; = \; 0.12$$

$$P_C(WWL) = 0.4 * 0.75 * 0.6 \; = \; 0.18$$

$$P_C(LWW) = 0.6 * 0.75 * 0.4 \; = \; 0.18$$

$$\boldsymbol{P_C(\{WWW, WWL, LWW\})} = P_C(WWW) + P_C(WWL) + P_C(LWW) =$$

$$= 0.12 + 0.18 + 0.18 = \mathbf{0.48}$$

Since $\boldsymbol{P_C = 0.48 > 0.375 = P_F}$, the order **Coach-Father-Coach** maximizes the chances of winning.

If the requirement for consecutive wins is removed then:

Father first (Father-Coach-Father):

The probability of winning two matches is $P_{F'}(\{WWW, WWL, \mathrm{LWW}, \mathrm{WLW}\}) = P_{\mathrm{F}} + P_F(WLW)$:

$$P_F(WLW) = 0.75 * 0.6 * 0.75 = 0.3375$$

$$\boldsymbol{P_{F'}(\{WWW, WWL, LWW, WLW\})} = 0.375 + 0.3375 \; = \; \mathbf{0.7125}$$

Coach first (Coach-Father-Coach):

The probability of winning two matches is $P_{\mathrm{C}'}(\{WWW, WWL, \mathrm{LWW}, \mathrm{WLW}\}) = P_{\mathrm{C}} + P_{\mathrm{C}}(WLW)$.

$$P_C(WLW) = 0.4 * 0.25 * 0.4 = 0.04$$

$$\boldsymbol{P_{C'}}(\{\boldsymbol{WWW}, \boldsymbol{WWL}, \boldsymbol{LWW}, \boldsymbol{WLW}\}) = 0.48 + 0.04 = \mathbf{0.52}$$

In this case, since $\boldsymbol{P_{F'}} = \mathbf{0.7125} > \mathbf{0.52} = \boldsymbol{P_{C'}}$ the order **Father-Coach-Father** is preferred.