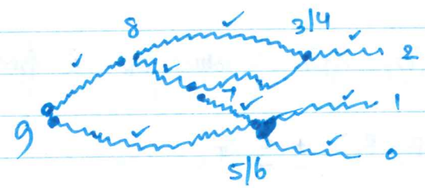
SUMMARY FOR JOINT

Opt 1.



$\text{Var } X_{9,8} = t_{9,8} \quad \text{Var } X_{3|4,2} = t_{3|4,2} \quad \text{Var } X_{3|4,0} = \text{Var } X_{5|6,1} = t_{5|6,0}$

$$\text{Var } X_{9,5|6} = \frac{t_{1,5|6}\, t_{9,5|6}}{t_{1,5|6} + t_{9,5|6}} + \frac{t_{9,5|6}^2}{(t_{9,5|6} + t_{1,5|6})^2} \underbrace{(t_{9,8} + \text{Var } X_{8,1})}_{\text{Var } X_{9,1}}$$

$$\text{Var } X_{8,1} = \frac{t_{8,1}(2t_{8,3|4} - t_{8,1})}{2t_{8,3|4}} \qquad \text{Var } X_{1,5|6} = \text{Var } X_{9,5|6} + t_{9,8} + \text{Var } X_{8,1}$$

$$\text{Var } X_{8,3|4} = \frac{t_{8,3|4}}{2} \qquad \text{Var } X_{1,3|4} = \frac{t_{1,3|4}}{2} + \text{Var } X_{8,1}$$

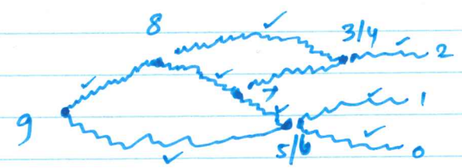
Not correct

$$C = \begin{bmatrix} \text{Var } X_{9,5|6} + \text{Var } X_{5|6,0} & \text{Var } X_{9,5|6} \\ \text{Var } X_{9,5|6} & \text{Var } X_{9,5|6} + \text{Var } X_{5|6,1} \\ \text{Var } X_{9,8} + \text{Var } X_{8,1} + \text{Cov}(X_{8,1}, X_{1,3|4}) & \text{Var } X_{9,8} + \text{Var } X_{8,3|4} + \text{Var } X_{3|4,2} \end{bmatrix}$$

$$\text{Cov}(X_{8,1},\, X_{1,3|4}) = -\frac{t_{8,1}\, t_{1,3|4}}{2}$$

LOOPS MODEL

Opt 2.



$\text{Var } X_{3|4,2} = t_{3|4,2} \quad \text{Var } X_{5|6,0} = t_{5|6,0} = \text{Var } X_{5|6,1}$

$$\text{Var } X_{9,8} = \frac{t_{9,8}(2t_{9,5|6} - t_{9,8})}{2t_{9,5|6}} \qquad \text{Var } X_{8,1} = \frac{t_{8,1}(2t_{9,5|6} - t_{8,1})}{2t_{9,5|6}}$$

$$\text{Var } X_{1,5|6} = \frac{t_{1,5|6}(2t_{9,5|6} - t_{1,5|6})}{2t_{9,5|6}} \qquad \text{Var } X_{9,5|6} = \frac{t_{9,5|6}}{2}$$

$$\text{Var } X_{8,3|4} = \frac{t_{8,3|4}\, t_{1,3|4}}{t_{8,3|4} + t_{1,3|4}} + \frac{t_{8,3|4}^2}{(t_{8,3|4} + t_{1,3|4})^2} \text{Var } X_{8,1}$$

$$\text{Var } X_{1,3|4} = \frac{t_{8,3|4}\, t_{1,3|4}}{t_{8,3|4} + t_{1,3|4}} + \frac{t_{1,3|4}^2}{(t_{8,3|4} + t_{1,3|4})^2} \text{Var } X_{8,1}$$

Hilroy