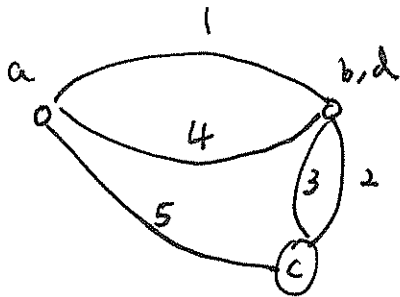


problem 3

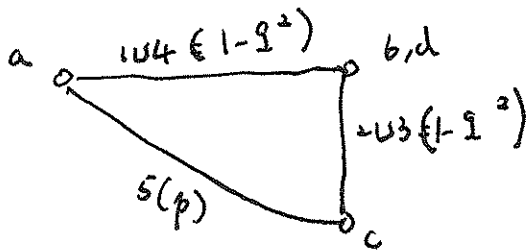
$$R_{ab} = p(6) \cdot R(G_1) + (1-p(6)) \cdot R(G_2)$$

$$= 0.9 \times 0.99891 + 0.1 \times 0.98829 = 0.997848$$

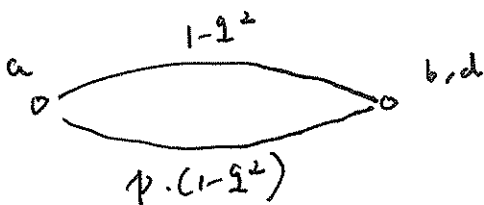
$$G_1 = G - e_6$$



↓ parallel reduction



↓ series reduction



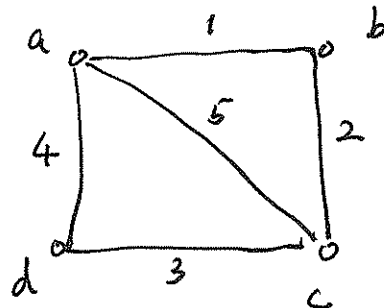
↓ parallel reduction

$$1 - \frac{1 - (1 - (1 - 9^2))}{(1 - p(1 - 9^2))}$$

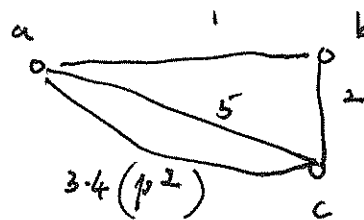
$$= 1 - 9^2 (1 - p(1 - 9^2)) \quad (9=0.1, p=0.9)$$

$$R(G_1) = 0.99891$$

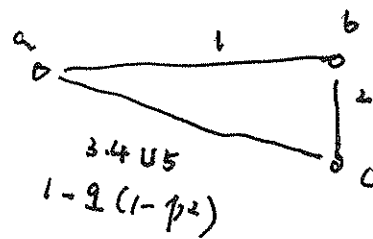
$$G_2 = G - e_6$$



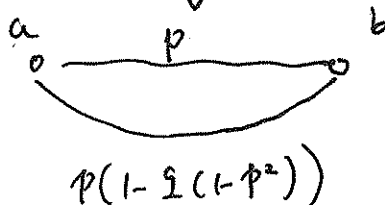
↓ series



↓ parallel



↓ series



↓ parallel

$$1 - 9 [1 - p(1 - 9(1 - p^2))]$$

$$R(G_2) = 0.98829$$