

①

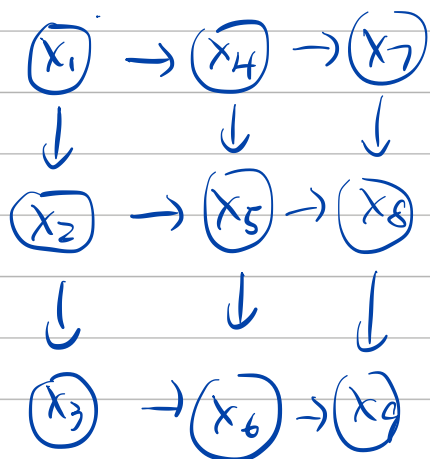
a) 
$$p(x) = p(x_1) p(x_2 | x_1) p(x_3 | x_1, x_2) p(x_4 | x_1, x_2, x_3) p(x_5 | x_1, x_2, x_3, x_4) \\ p(x_6 | x_1, x_2, x_3, x_4, x_5) p(x_7 | x_1, x_2, x_3, x_4, x_5, x_6) \\ p(x_8 | x_1, x_2, x_3, x_4, x_5, x_6, x_7) p(x_9 | x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8)$$

b) No

c)

$$p(x) = p(x_1) p(x_2 | x_1) p(x_3 | \cancel{x_1}, x_2) p(x_4 | x_1, \cancel{x_2}, \cancel{x_3}) p(x_5 | \cancel{x_1}, x_2, \cancel{x_3}, x_4) \\ p(x_6 | \cancel{x_1}, \cancel{x_2}, x_3, \cancel{x_4}, x_5) p(x_7 | \cancel{x_1}, \cancel{x_2}, \cancel{x_3}, x_4, x_5, x_6) \\ p(x_8 | \cancel{x_1}, \cancel{x_2}, \cancel{x_3}, \cancel{x_4}, x_5, \cancel{x_6}, x_7) p(x_9 | \cancel{x_1}, \cancel{x_2}, \cancel{x_3}, \cancel{x_4}, \cancel{x_5}, x_6, \cancel{x_7}, x_8)$$

d)



e) 9 parameters